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1. Scope of IJAL
2. Americanist results
3. Texts and informants
4. Relationships and borrowing
5. Form and meaning

When Franz Boas published the first number of the International Journal of American Linguistics near the end of World War I, he included an introductory paper of his own (IJAL 1.1–8). This paper is here summarized, together with editorial comments of my own inclosed in brackets.

1. IJAL is to be devoted to AMERICAN ABORIGINAL languages. [If Jochelson guessed correctly, Paleosiberian languages were introduced to Asia from America.[1] Perhaps one should regard the whole matter from the point of view of problem rather than from an exclusively geographic point of view, or from an exclusive interpretation of ABORIGINAL. As to the latter, studies in borrowing between aboriginal languages and those spoken by white people seem well within the scope of possible problems.]

2. Our knowledge of American Indian languages is fragmentary at best; and practically absent in Latin America. [The contributions of Americanists during the last thirty years have added more to linguistic methodology than to a well balanced picture of the languages of the New World; the picture for Latin America remains largely blank.]

3.1. The outstanding need is for large masses of texts to elucidate the structure of languages. [Whatever the means may be, the chief end is certainly linguistic structure.]

3.2. Texts written by native speakers are superior to those obtained by dictation from a few informants [= superior for narrative texts. Our recent experience in implementing languages for intensive training suggests that the most revealing texts to use as a basis for structural studies are those which are recorded while two or more native speakers are engaged in conversation. Some duplicating machine is usually implied because native speakers in actual conversation tend to go faster than dictation speed.]

3.3. The weakness of texts, even those written by native speakers, is that they can seldom be taken as good examples of the spoken language. Conversations included in such texts are apt to be stereotyped along literary lines. [If the linguist would be superior to the native recorder, he will not be satisfied with working with a single informant: he can record the conversation of two informants in the laboratory; or he can make notes, catch as catch can, of the still more natural conversations of Indians living their normal life from day to day at home.]

3.4. Indians able to write texts have generally had a modern school education, and are therefore more or less bilingual. The native language of such speakers is affected by the learned language in phonetics, grammar (morphological forms and syntax), and vocabulary; formerly productive features, as stem composition, are frozen, and the facility for making new

[1] Roman Jakobson, The Paleosiberian Languages, AA 44.602–20.

formations is lost. Some members of the older generation can dictate texts not affected by a second language. [Little work has been done on changes in the native language wrought by bilingualism.[2] But the parallel subject of changes wrought in the native culture through the impact of white culture has become a special field of cultural anthropology, acculturation.[3]]

3.5. Variants of the same tale should be secured from different informants. Text collections of varied content, including not only native traditions, but also native poetry, letters, descriptions of daily occurrences, industries, customs, and the like make possible a more complete lexicon. [Missionary dictionaries, such as Baraga's Ojibwa, still exceed in completeness anything produced by modern linguists.]

4.1. Close relationships between sister languages of one family were discovered from comparisons of short word lists. To discover more distant relationships may be impossible because American Indian languages lack historical documents upon which Indo-Europeanists rely in part in operating their celebrated comparative method. [With forms given in the daughter languages, but without any historical documents, Bloomfield was able to reconstruct a parent language (Algonquian) by the strict application of the comparative method.[4] The comparative method can be used without historical documents; the question remains as to whether distant, less obvious relationships between daughter languages are observable and demonstrable without historical documents.]

4.2. In tracing the differentiation of daughter languages from the parent language, a genealogical series must be established. But in the differentiation, the factor of borrowing may loom so large that the genealogical series would appear to lead back to more than one source, offer arbitrary choices, and hence be meaningless. [In other anthropological fields too, Boas found that the pursuit of history, beyond the more immediate and documented sources, leads to arbitrary and therefore unacceptable choices.[5]]

4.3. Phonetic areas contain genetically unrelated languages sharing nasalized vowels or glottalized stops or elaborate development of laterals or a paucity of labials or trilled consonants. The evidence of phonetic areas suggests that the sound system of a given language changes through borrowing from neighboring languages. Marriage or capture of foreign wives introduces a persistent foreign influence, especially on growing children. The only alternative explanation to foreign influence of the diffusional type is inner forces in the sound system. [Boas mentions but does not develop explanations via inner forces. The Prague school does, if correlation patterns or oppositions may be equated to inner forces.[6]]

4.4. It is also possible to delimit morphological areas showing the distribution of incorporation of nominal object or of instrumental affixes or of localizing affixes or

[2] Morris Swadesh, Observations of Pattern Impact on the Phonetics of Bilinguals, in Language, Culture and Personality, 59–65; Menasha, Wisconsin, 1941.

[3] R. Redfield, R. Linton, and M. J. Herskovits, Memorandum for the Study of Acculturation, AA 38.149–52.

[4] Leonard Bloomfield, On the Sound System of Central Algonquian, Language 1.130–56.

[5] Compare A. L. Kroeber, History and Science in Anthropology, AA 37.539–69; Franz Boas, History and Science in Anthropology: a Reply, AA 38.137–41.

[6] Roman Jakobson, Prinzipien der historischen Phonologie, TCLP 4.247–67. But the Prague school also develops explanations via linguistic areas similar to those of Boas; compare Sebeok's review of Velten in this issue of IJAL, Jakobson's article on Boas, also in this issue of IJAL, and his Über die phonologischen Sprachbünde, TCLP 4.234–40, and also his Sur la théorie des affinités phonologiques des langues, Actes du quatrième congrès international de linguistes (1936), pp. 48–59; Copenhague, 1938.

of gender in terms of form or shape rather than sex; or of such operations as reduplication or vowel or consonant alternations. [The increased observation of such similarities between language families (in the comparative method sense of language families) has reduced the number of ultimate classifications for American Indian languages north of Mexico from over fifty in Powell's day to six in Sapir's day.[7] But we still do not know where or whether this reduced classification rests on genetic relationships, or on borrowing of the diffusional type.]

4.5. Dialect studies offer sure ground for exploration, but are relatively neglected. [Dialects are here used in the sense of closely related but not mutually intelligible languages which can be approached by the comparative method. Dialect geography is also a field neglected by Americanists; it is not even listed by Boas among the problems which a linguistic journal must include.]

5.1. Semantic and psychological problems of many kinds await the investigator, including some which arise from or can be critically checked by the great diversity of American Indian languages. [While such problems are important, and while the languages of the New World are sufficiently diverse to provide contrastive perspective, the prior problem remains of stating the structure of any one language in a completely understandable way so that the difference between the structure of that language and other languages can be appreciated. This prior problem may appear less demanding or forceful to students of Indo-European or Semitic or even Finno-Ugric languages because such students are surrounded by colleagues all studying the same or closely related bodies of material, and can therefore allude to well known material in support of incomplete statements; if these are not clear to the beginner, he is told to learn the materials on which the statements are based. But the prior problem of a completely understandable statement of linguistic structure is inescapable for Americanists. Here one cannot assume that fellow Americanists share a knowledge of the language about which one is making structural statements (the materials upon which Stanley Newman based his recently published statements of Yokuts were probably known independently by only one other Americanist, A. L. Kroeber).]

5.2. Categories of meaning are as diverse as the formal features of American Indian languages. The statement of these categories may in some instances be a matter of arbitrary definition. [Are not such statements always matters of arbitrary definition?]

5.3. The unit of human speech as we know it is the sentence, not the word. [It might also be argued that the smallest sample of normal linguistic behavior is an exchange of speech between two individuals: a conversation. Difficulties in syntax and in sentence contour are certainly lessened when a conversational exchange, rather than a sentence, is taken as a basis of analysis. A sample of normal linguistic behavior implies also a stylistic norm. As in dialect study, where it is convenient to set up one dialect as a standard of reference, so in stylistic studies it may be necessary to set up some sort of a comparable norm; this might be based on conversation between adult members of a household.]

5.4. Stylistic diversity should be recorded and analyzed: oratorical speeches, metaphorical expressions, personality differences in discourse, stereotyped formulae quite divorced from personality, prayers and incantations, the narrative form, lyrical poetry, meaningless syllables that occur in songs, distorted words in poetry, obsolete

[7] Compare the Powell map of 1891 and the American Ethnological Society map of 1944: J. W. Powell, Indian Linguistic Families of America North of Mexico, BAE-R 7.1–142; C. F. Voegelin and E. W. Voegelin, Map of North American Indian Languages, AES-P 20.

or symbolic terms in secret language, fixed forms ascribed to animals or special personages. [This list should be extended to include the speech of children during and after the babbling period, and the speech of psychotic or otherwise abnormal persons; conversation between women engaged in cooking or assisting in childbirth, for example; conversation between men visiting or quarreling or occupied with burial of the dead, for example, and between men and women, between individuals of the same and also of different ages, between individuals acting in their various cultural roles.]

ANALYSIS OF A MIXTECO TEXT

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1. The argument
2. Introduction to text
3. Text
4. Chart of positions in noun phrases
5. Chart of positions in verb phrases
6. Analysis of text

1. The argument. Some changes of form and meaning are due to the position of morphemes in the phrase. In beginning analysis of a Mixteco text one finds, at first, the appearance of heavy prefixation and suffixation, and morphological processes of stem-initial consonantal change, and inflection by interchange of tonemes; in addition, there appear to be many monosyllabic stems. Upon attempting an analysis from this point of view, the description becomes very unwieldy because one encounters long words with much incorporation of noun forms in verbs and verb forms in nouns.

After further study, monosyllabic "suffixial" morphemes begin to appear in dissyllabic form, in other positions in the phrase, and to occur as completely free entities. A study of layers of immediate constituents then indicates that even in monosyllabic form these items are not so intimately related to single morphemes to which they are adjacent (and with which they are phonologically linked as atonic forms) as to groups of forms which have every appearance of separate words.

Ultimately, then, one finds it more convenient to describe Mixteco without postulating a deep-rooted division between free forms and bound forms (syntax and morphology), but to handle items in accordance with the positions which they occupy in various relationships, without initial regard to whether or not they are tonic or atonic, as a less important subdivision within the lists of items which can come in the basic positions, a dichotomy can be described between those forms which are phonetically independent and those which are not, and describe, where possible, the conditions under which full forms become atonic. The description of the tonemic and consonantal changes of stems do not occupy as grammatically important or descriptively as prominent a place as they would under severe insistence upon having a sharp morphology-syntax division, since they are handled rather as extremely advanced stages of sandhi changes, with their most important characteristics of positional occurrence and basic meanings plus positional meanings frequently remaining.

Once granting for description of a language of this type the value of emphasis upon positions first and form or form classes resulting from position as secondary, it might well be enquired whether a similar approach to languages of a far different type would not uncover some descriptive advantages which would help to supplement the traditional arrangement of grammars which takes for granted as its most prominent division (apart from sounds) a linguistic chasm between morphology and syntax.

2. Introduction to text. The analysis of the following text[1] exhibits several Mixteco characteristics which carry special interest. One of these characteristics is the extreme amount of abbreviation, which, in rapid speech, makes a language which has

[1] This material was gathered by the author in various field trips to the Mixteco region of south western Mexico (State of Oaxaca) during 1935–41, under the auspices of The Summer Institute of Linguistics, Glendale, California. The dialect is that of San Miguel El Grande; narrator: Narciso Merecías.

basic dissyllabic morphemes appear to be monosyllabic; another is the subdivision of morphemes into types which must be classified into various groups according to whether or not their tonemes may be changed, or whether they in turn may cause the perturbation of tonemes of morphemes which follow them. A third is the specialization of meaning and form caused by the position of morphemes in phrase constructions. A fourth is the near-lack of any unit which approximates a word, or any marked distinction between morphological and syntactic structure.

In order to demonstrate the specialization of construction and positional meanings, literal translations are given of the basic morphemes, rather than of phrases; often these must be compared with the free translation which follows each paragraph if one wishes to see the full resultant phrase meaning.

In order that the relationship of basic form to abbreviated or perturbed form may be readily apparent, the first line of text gives the material as it was dictated; the second line gives the morphemes as they are found in isolation, or in slow full forms, or in special contexts (the commentary usually indicates how to determine the basic form).

In order to separate those changed forms which influence the grammatical meaning from those forms which are changed mechanically, the forms changed for functional grammatical purposes are placed between bars [//]; thus, all verbs are given in the potential aspect in the second line of text (since these have the most highly differentiated tonemic forms and best serve as a basis of prediction for other forms) but occur between bars if the dictated form is in the durative aspect; it should be noticed that the forms between bars are in the minority. Where there is no change between the basic form and the form in the dictated text, [——] is given in the second line, so that the small proportion of unmodified forms can readily be seen. The sign [$^{+}$] preceding a basic form indicates that it is capable of perturbing the tonemes of a morpheme that follows it, if the following form in turn is capable of being perturbed; the sign [$^{\pm}$] preceding a form indicates that when unperturbed itself, and only then, a morpheme is capable of perturbing a following one. A question mark in the second line indicates that no dissyllabic form of that particular morpheme has as yet been discovered in this dialect.

In order to aid in the location of some of these items as they appear throughout the article, note the following brief index (numbers refer to the sections of the commentary rather than to morphemes so numbered in the text):

Problems in traditional syntax-morphology division: with prefix-like proclitics 8, 10–11; with suffix-like enclitics 10–11, 39; extended to English, note 8

Positions: as theoretically primary, establishing form classes and parts of speech 8, note 7; in conjunction with immediate constituents in English analysis, notes 8 and 4; unit function of a complex constitutent in a position, note 7; ambiguous relationships 14–5; items defective in position 14–5, 26–34, 88; the relative order and meaning of positions within noun and verb phrases, see charts and references therein to commentary; function of positions not indicated in charts—dual affirmation 58–62, equational 88–93, open modal prephrase 1, 35, 181, close modal prephrase 47, 191, 244, close modal postphrase 35, 121, 191, modal accompaniment 3, transitional 7, of nouns 6, 26–34, 39, 88, 252–3, preverb emphatic 39, 252–3, locational phrase 14–5, 20–1, 66–70, adjectival prephrase modifier 154, 160, 169, phrase modifier 126–38, 84–7, 178–80, 181–3, 275–80, 281–3, phrase as object 26–34, 284–6, negative with potential 48, questions 212, 121, postquotative 103, 222, prequotative 103, 209–11, doubtful basic class 3, 212

Lexical meanings affected by position:

with loss of basic lexical meaning of verb modifier 5; directionals (from body parts to preposition-like words) 14–5; of numerals and collective-like words 29; of nouns as abstracted qualifiers 161; of nouns as modal qualifiers 1; of adjectives as verbal qualifiers 191; of adjectives as prephrase modifiers 154

Forms: basically dissyllabic 2; monosyllabic and compounding tendencies, note 3, 5; proclisis 8, 39, and immediate constituents 4; enclisis (pronominal and nonpronominal) 39; phonemic interpretation of long vowels 5; types of abbreviation 8, 10–11, 38, 45, 124, 39, see also interlinear text; zero phonemes of a morpheme 4; hesitation forms 8; homophonous forms 123, 249; consonantal change 1, 4, 18

Tones: standard tonemic shift 4; perturbation of and by enclitics 39, 42, 53, note 11; perturbation of proclitics 8, 27; loss of perturbing power 10–11, 13; special perturbations—by high morphemes 14–5, of nouns for qualitative modification 161, of ʔáčí 103, of bèʔe 132, of ʔəⁿgá 193, of ⁿdé- 244, of ná- 121, by ní 307–8

The phonemic symbols are used in general as in traditional phonetic alphabets: voiceless unaspirated stops: [p, t, č, k, kʷ, ʔ]; prenasalized voiced stops: [ᵐb, ⁿd, ⁿ], ⁿg] (these tend to unvoice the occlusion in morpheme-medial position); voiced nasals: [m, n, ñ] (postsyllabic nasal is actualized as phonetic nasalization of the preceding syllabic, or, in morpheme structure CVV, CVʔV, CVhV, of the two preceding syllabics —it occurs only morpheme final, and is the only consonant so to occur); voiced fricatives: [b, d, ž] ([b] varies freely from a stop, especially initially in morphemes, to a flat fricative, in the same position, to a [w], especially morpheme medially; [ž] varies freely from a sibilant to [y]); voiceless fricatives: [s, š, x̌, h] ([š] is rare with this informant, whereas the retroflex phoneme [ṣ] is more frequent; some informants from the same village use only one phoneme which phonetically is usually of the nonretroflex variety; [h] varies from little to considerable friction on the velum); lateral: [l] (slightly fricative after [i]); the trill: [r] (fricative trill in all positions except enclitic initial, where it becomes a single flap); the vowels: [i, e, a, o, u, ə] (fairly close varieties of the first five, with [ə] somewhat back, high, unrounded, or centering); Spanish loans bring in some other sounds and problems. There are three level tonemes[2]; of these, high is written [ˊ], low [ˋ], and mid is given no symbol here.

[2] For a deductive description of Mixteco tonemic interchange as related to a general procedure for the analysis of tone languages, see my Tone Languages: The Nature of Tonal Systems with a Technique for the Analysis of Their Significant Pitch Contrasts, to be published by the Linguistic Society of America.

3. TEXT

Text as dictated:

žóan-na te-híka

Basic isolated forms:

žúkan[1] ʔ[2] tee[3] /kaka/[4]

Literal translation of morphemes:

that other and is
thing (definite) walking

kuu	ʔisò.		te-nì-keⁿda	
——[5]	——[6]		tee[7] nì[8]	——[9]
about	rabbit		and complete	come out
ti-ʔinà			hínu-tà	
+kətə[10]	——[11]		/kunu/[12]	+–±kətə[13]
animal	dog		is running	animal
híín	ʔisó.		te-nì-ⁿdàbə-tà	
+——[14]	ʔisò[15]		tee[16] nì[17] /kàbə/[18]	
instrument	rabbit		and cp. enter	remaining
	žaú	kaba.		
+kətə[19]	žaù[20]	+——[21]		
animal	hole	cliff		

Thereupon the rabbit was walking about. A dog came and ran after the rabbit. Then the rabbit entered into a cave.

te-nì-hinì		koò
tee[22] nìì[23]	/kunì/[24]	+____[25]
and cp.	see	snake

há-ní-ku-tənə		beltá	ⁿdə́bə-tə̀	
+haà[26] nìì[27]	kuu[28] ____[29]	____[30]	/kə̀bə/[31]	
thing cp.	be many	times	is entering	remaining

	žaú	kaba.	"nú-sáá	
+kətə[32]	žaù[33]	+____[34]	núú[35] ____[36]	
animal	hole	cliff	if	thus (hypothesis)

te-ki?-òn		kú-ⁿdatu-ó		
tee[37] ki?ìn[38]	+žóó[39]	kuu[40] ⁿdatu[41]	+žóó[42]	
and go	we (inclusive)	be wait	we	(incl.)

?iní	žaù,	ⁿdé-ó	
?inì[43]	____[44]	/ⁿdè?é/[45]	+žóó[46]
insides	hole	see	we (incl.)

nú-mà-ñí?-ò-dé				
núú[47]	+maà[48]	+ñi?ì[49]	+žóó[50]	čàa[51]
if	not	obtain	we	man
(hyp.)	(potential)		(incl.)	(him)

ke-o-dé."
+kee[52] +žóó[53] čàa[54]
eat we man (him)

But a snake saw that the rabbit had kept entering the cave many times. "Let's go, if that's the case, and wait in the hole; we'll see if we can't grab him and eat him."

žóan-na		te-nì-keⁿda	?isò
žúkan[55] ?[56]		tee[57] nìì[58] ____[59]	____[60]
that	other thing (definite)	and cp. come out	rabbit

kʷa?àn-tə̀,		kʷà-ⁿdúkú-tə́	
____[61] +kətə[62]		kʷa?àn[63] +ⁿdúkú[64]	+kətə[65]
go	animal	go look	animal

hà-kéé-tə́		?əən	ladó.
+haà[66] /+kee/[67]	+kətə[68]	____[69]	____[70]
thing eat	animal	one	side

te-nì-hinì-tə̀
tee[71] nìì[72] /kunì/[73] +kətə[74]
and cp. see animal

há-ní-kə̀bə		koò
+haà[75] nìì[76] ____[77]		+____[78]
thing cp. enter		snake

kʷa?àn-tə̀		?iní	žaù	?isò,
kʷa?àn[79] +kətə[80]		?inì[81]	____[82]	____[83]
go	animal	insides	hole	rabbit

hà-ⁿdátu		koò	?isó,
+haà[84] ⁿdatu[85]		+____[86]	?isò[87]
thing wait		snake	rabbit

nà-?orá	kú-à		háà	?isò,
naà[88] ____[89]	/kuu/[90]	+haà[91]	haà[92]	____[93]
what time	be	thing	arrive	rabbit
thing (uncertainty)				

"te-ka-təən		koò	?isó
tee[94] ?[95] ____[96]		+____[97]	?isò[98]
and make grasp effort		snake	rabbit

te-kahi-tə́		?isò,"
tee[99] +____[100]	+kətə[101]	____[102]
and eat	animal	rabbit

?áčí-tə̀.		žóan-na	
/?ačì/[103]	+kətə[104]	žúkan[105]	?[106]
say	animal	that thing	other (definite)

te-nì-ku-núu nì-kə̀bə
tee[107] nìi[108] kuu[109] núu[110] nìi[111] ——[112]
and cp. be moment cp. enter

koò.
+——[113]
snake

Thereupon the rabbit came out and went to look for something to eat elsewhere. Then he saw that the snake had entered into the rabbit's cave, to wait for him, until he should come, "so that the snake might grab him and eat him," said the rabbit to himself. Then a little time went by since the snake had entered.

te-nì-kačì ?isò, "čó?ò,
tee[114] nìi[115] ——[116] ——[117] +——[118]
and cp. speak rabbit let's go

kí-ⁿdè?é nà-ún sá?a
ki?ìn[119] ——[120] naà[121] žúkan[122] ——[123]
go see what that thing thing (uncertainty) do

čà-ún nì-kə̀bə-de
čàa[124] žúkan[125] nìi[126] ——[127] čàa[128]
man that cp. enter man
thing

kʷa?àn-de ?inì bè?e-žó."
——[129] čàa[130] ——[131] be?e[132] žóó[133]
go man insides house ours (inclusive)

te-ni-kee ?isò kʷa?àn-tə̀.
tee[134] nìi[135] ——[136] ——[137] ——[138] +kətə[139]
and cp. go away rabbit go animal

te-nì-haà-tə̀ ?iní bè?e
tee[140] nìi[141] ——[142] +kətə[143] ?inǐ[144] be?e[145]
and cp. arrive animal insides house

kaba-tə́. žóan-na
+——[146] +kətə[147] žúkan[148] ?[149]
cliff animal that thing other (definite)

te-nì-ka?àn-tə̀,
tee[150] nìi[151] ——[152] +kətə[153]
and cp. talk animal

"tà-ní-?ini," ?áčí ?isò.
+tàu(?)[154] nìi[155] ——[156] ?ačì[157] ——[158]
good cp. become late say rabbit

The rabbit said, "Come on, let's go and see what that fellow is doing who entered into our house." The rabbit went, and arrived at his cliff home. Then he said, "Good afternoon," says he.

te-ná?í žúú-ni ká-ⁿdee
tee[159] ——[160] žuù[161] ?[162] /kuu/[163] ——[164]
and silent rock- like just be position inside

koò ?iní žaù kaba. toⁿdó
+——[165] ?inì[166] ——[167] +——[168] ——[169]
snake insides hole cliff much

kú-səə ?iní koò
/kuu/[170] ——[171] ?inì[172] +——[173]
be glad insides snake

hà-ní-ka?àn ?isò, ni
+haà[174] nìi[175] ——[176] ——[177] nìi[178]
thing cp. talk rabbit cp.

haà-tə̀. "bina ⁿǰaa
——[179] +kətə[180] ——[181] ⁿǰaa[182]
arrive animal today precise (now)

te-kahi-žo," ?áčí koò.
tee[183] +——[184] žóó[185] ?ačì[186] +——[187]
and eat we say snake

But the snake kept just as still as a rock inside the cave; he was extremely happy that the rabbit spoke when he arrived. "We'll eat him up right now," says the snake.

te-nì-ka?àn		tuku	?isò
tee[188] nìi[189] ——[190]		——[191]	——[192]
and cp. talk		addition	rabbit
?ə^{n}gà			hínu,
<?əən-kà[193]			——[194]
another			time
"tà-ní-?ini,"		?áčí	tuku
+tàu(?)[195] nìi[196] ——[197]		?ačì[198]	——[199]
good cp. become late		say	different
?isò.			
——[200]			
rabbit			

The rabbit repeated: "Good afternoon," says he again.

žúan-na				
žúkan[201] ?[202]				
that other				
thing (definite)				
te-nì-nà-kani				?inì
tee[203] nìi[204]	?[205]	——[206]		——[207]
and cp.	repeat	strike (think)		insides
koò	"hà-ká?àn-žò			
+——[208]	+haà[209]	ka?àn[210]	žóó[211]	
snake	thing	talk	we (inclusive)	
ší-				
+šíi[212]				
or				
há-má-ká?àn-žò"				
+haà[213] +maà[214]	ka?àn[215]	žóó[216]		
thing not (potential)	talk	we (inclusive)		

?áčí	koò.
?ačì[217]	+——[218]
say	snake

Thereupon the snake pondered at some length, "Should I speak, or shouldn't I," says he.

"tà-ní-?ini,"			?áá	tuku
tàu(?)[219] nìi[220]	——[221]		?aà[222]	——[223]
good cp.	become late		say	addition
?isò		?ə^{n}gà		hínu.
——[224]		<?əən-kà[225]		——[226]
rabbit		another		time
žúan-na		te-nì-ka?àn		
žúkan[227] ?[228]		tee[229] nìi[230]	——[231]	
that other		and cp.	talk	
thing (definite)				
koò,	"tà-ní-?ini,"			?áčí
+——[232]	tàu(?)[233]	nìi[234]	+——[235]	?ačì[236]
rabbit	good	cp.	become late	say
koò.				
+——[237]				
snake				

"Good afternoon," says the rabbit again. Then the snake replied, "Good afternoon," says he.

žóan-na		te-nì-kačì		?isò,
žúkan[238] ?[239]		tee[240] nìi[241]	——[242]	——[243]
that other		and cp.	speak	rabbit
thing (definite)				
"^{n}dé-nì-hinì-rì				
?o^{n}dè[244] nìi[245]	/kunì/[246]	ruù[247]		
where cp.	see	I (familiar)		
hà-ká?àn		?əən		kaba?
+haà[248] ka?àn[249]		——[250]		+——[251]
thing talk		one		cliff

hà-rúù, tú-ká-ñáá ?inì-tò
+haà[252] ruù[253] túu[254] /kaa/[255] ——[256] ——[304] +kətə[305]
thing I (fam.) not be be bad (crazy) (foolish) insides animal

há-tú-ní-kú-ⁿdéé-tó
+haà[306] túu[307] +nii(?)[308] kuu[309] ——[310] +kətə[311]
thing not be complete be power- animal ful

şinì-rí."
+——[257] ruù[258]
head I (mine) (fam.)

nì-hio
nìl[259] hiko[260]
cp. turn about

híín ?isó.
+——[312] ?isò[313]
instrument rabbit

kaba-tò te-nì-kee-tò
——[261] +kətə[262] tee[263] nìl[264] ——[265] +kətə[266]
turn animal and cp. go animal around away

kʷá?àn-tò.
kʷa?àn[267] +kətə[268]
go animal

Then the rabbit said, "Where have I ever heard of a cliff talking? I'm not dumb." He turned about and went away. He wasn't foolish enough to enter the hole, where the snake wanted to eat him. Then the snake was left in the hole, and angry, and upset because he did not win out over the rabbit.

tú-ní-ká-ñáá
túu[269] +nii(?)[270] kuu[271] ——[272]
not be complete be bad (crazy) (foolish)

"bina te-nì-hinì-žò
——[314] tee[315] nii[316] /kunì/[317] +žóó[318]
today (now) and cp. see (understand) we

şinì-tá hà-ⁿdə́bə-tò
+——[273] +kətə[274] +haà[275] /kèbə/[277] +kətə
head animal thing enter remaining animal

há-tú-ká-ñáá şinì
+haà[319] túu[320] kaa[321] ——[322] +——[323]
thing not be bad (crazy) (foolish) head

?iní žaù-tà, hà-kuní
?inì[278] ——[279] +kətə[280] +haà[281] kunì[282]
insides hole animal thing want

?isó," ?áčí koò.
?isò[324] ?ačí[325] +——[326]
rabbit say snake

koò há-káhi-tó.
+——[283] +haà[284] +kahi[285] +kətə[286]
snake thing eat animal

te-nì-keⁿda-tò
tee[327] nii[328] ——[329] +kətə[330]
and cp. come out animal

žúan-na te-nì-ⁿdòo koò
žúkan[287] ?[288] tee[289] nìl[290] ——[291] +——[292]
that other thing and cp. remain snake

te-kʷa?àn-tò.
tee[331] ——[332] +kətə[333]
and go animal

?iní žaù. te-nì-kitì
?inì[293] ——[294] tee[296] nìl[296] ——[297]
insides hole and cp. angry

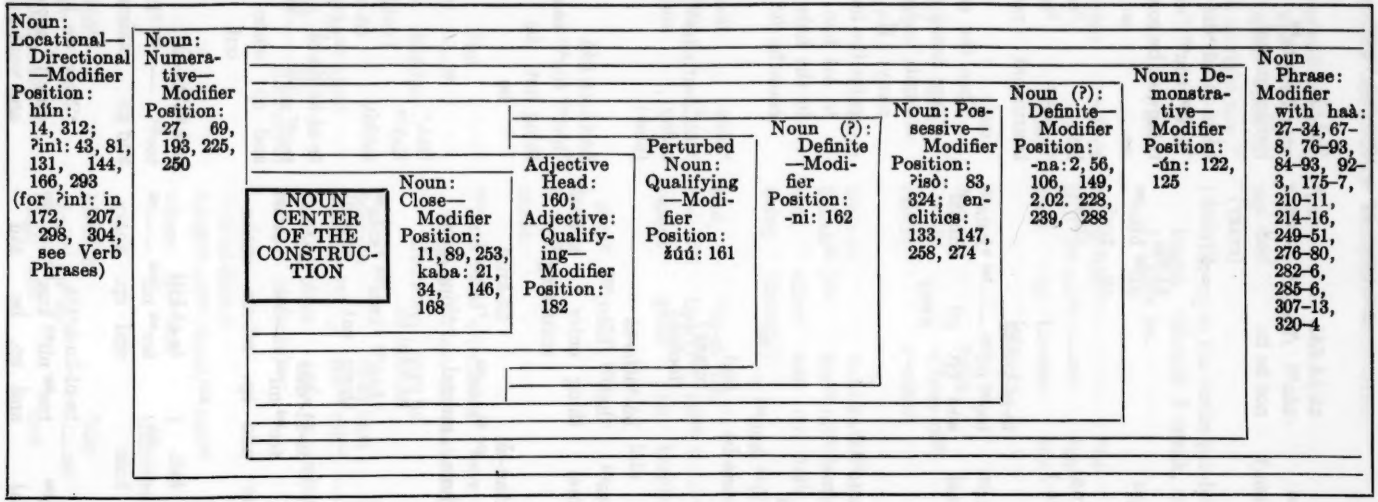
"Now we know that the rabbit isn't dumb," says the snake, and came out and went away.

?inì-tò te-nì-ku-kʷí?à
——[298] +kətə[299] tee[300] nìl[301] kuu[302] ——[303]
insides animal and cp. be sad

4. CHART OF POSITIONS IN NOUN PHRASES

Which Occur in the Text

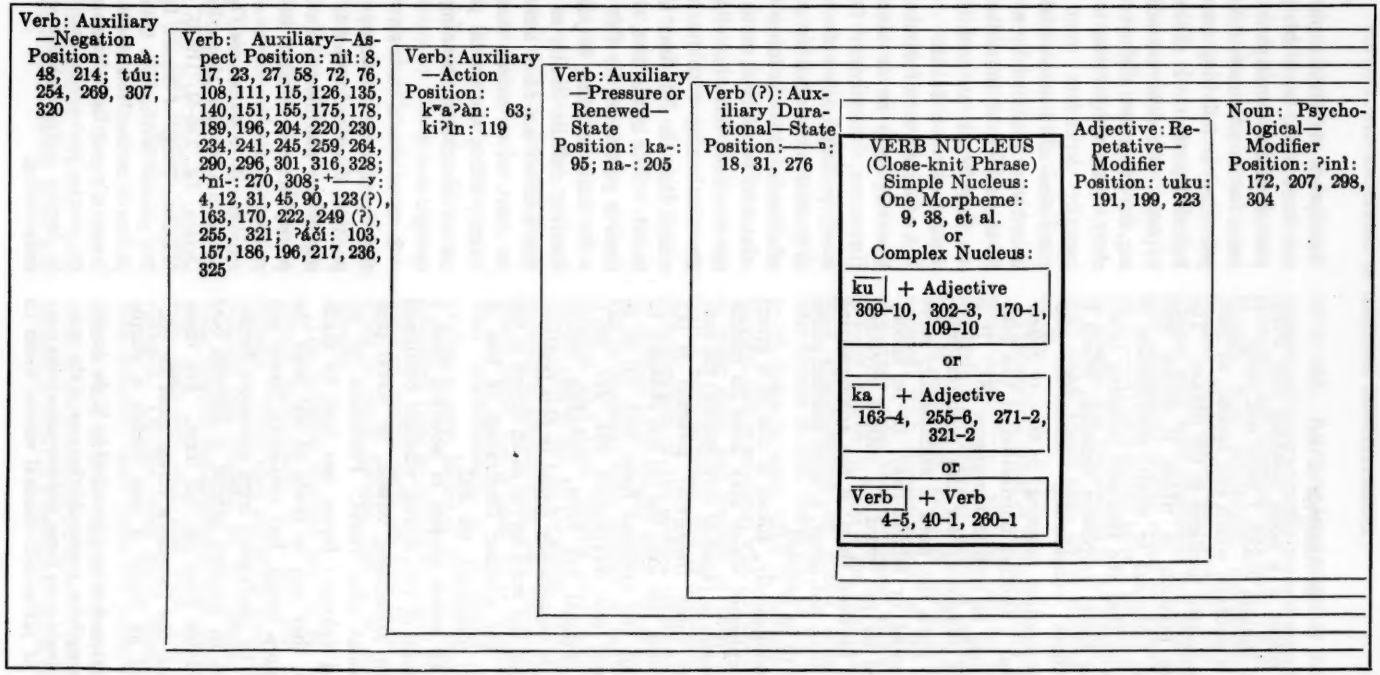
(For explanation of any position, see the commentary which describes the particular morphemes which occur in that position. Numbers refer to morphemes in the text, and include all noun phrases in this text with the number of each of their morphemes except the head. The only adjective phrase in the text (160-2) is woven into the chart, since an adjective phrase can be included in a noun phrase. Any position modifies all other positions which are covered top and bottom by the extended space of that position.)


Noun: Locational—Directional—Modifier Position: híín: 14, 312; ʔinì: 43, 81, 131, 144, 166, 293 (for ʔinì: in 172, 207, 298, 304, see Verb Phrases)
Noun: Numerative—Modifier Position: 27, 69, 193, 225, 250
NOUN CENTER OF THE CONSTRUCTION
Noun: Close—Modifier Position: 11, 89, 253, kaba: 21, 34, 146, 168
Adjective Head: 160; Adjective: Qualifying—Modifier Position: 182
Perturbed Noun: Qualifying—Modifier Position: žúú: 161
Noun (?): Definite—Modifier Position: -ni: 162
Noun: Possessive—Modifier Position: ʔisò: 83, 324; enclitics: 133, 147, 258, 274
Noun (?): Definite—Modifier Position: -na: 2, 56, 106, 149, 2.02. 228, 239, 288
Noun: Demonstrative—Modifier Position: -ún: 122, 125
Noun Phrase: Modifier with haà: 27–34, 67–8, 76–93, 84–93, 92–3, 175–7, 210–11, 214–16, 249–51, 276–80, 282–6, 285–6, 307–13, 320–4

5. CHART OF POSITIONS IN VERB PHRASES

Which Occur in the Text

(For explanation of any position, see the commentary which describes the particular morphemes which occur in that position. Numbers refer to morphemes in the text, and include all verb phrases in this text with the number of each of their morphemes except the head. Any position modifies all other positions which are covered top and bottom by the extended space of that position.)


Verb: Auxiliary—Negation
Position: maà: 48, 214; túu: 254, 269, 307, 320
Verb: Auxiliary—Aspect Position: nìt: 8, 17, 23, 27, 58, 72, 76, 108, 111, 115, 126, 135, 140, 151, 155, 175, 178, 189, 196, 204, 220, 230, 234, 241, 245, 259, 264, 290, 296, 301, 316, 328; +ní-: 270, 308; +——y: 4, 12, 31, 45, 90, 123(?), 163, 170, 222, 249 (?), 255, 321; ʔáčí: 103, 157, 186, 196, 217, 236, 325
Verb: Auxiliary—Action
Position: kʷaʔàn: 63; kiʔìn: 119
Verb: Auxiliary—Pressure or Renewed—State
Position: ka-: 95; na-: 205
Verb (?): Auxiliary Durational—State
Position: ——n: 18, 31, 276
VERB NUCLEUS
(Close-knit Phrase)
Simple Nucleus: One Morpheme: 9, 38, et al.
or
Complex Nucleus:
ku + Adjective
309–10, 302–3, 170–1, 109–10
or
ka + Adjective
163–4, 255–6, 271–2, 321–2
or
Verb + Verb
4–5, 40–1, 260–1
Adjective: Repetative—Modifier
Position: tuku: 191, 199, 223
Noun: Psychological—Modifier
Position: ʔinì: 172, 207, 298, 304

6. Analysis of text

1. žúkan is a noun meaning *that thing*, as in kuní-ná žúkan *I want that thing*. It is of a subtype which can appear, as here, in specialized positions in the phrase. The phrase position in which it occurs here means temporal or modal modification of verb, so that the resultant meaning (combining basic morpheme meaning, which is sometimes considerably obscured, plus phrase-position meaning) is *then*, or *following that*. Another illustration of this position may be seen in morpheme 181. It is almost obligatory for this position (especially when the word is semantically more abstracted or adverb-like), to be accompanied by te- (word 3), with a rhythmic break between them; if the accompanying word does not occur, a more marked pause tends to be inserted.

Phonologically, žúkan is one of a group of morphemes which may loose its middle consonant in rapid or slow speech; the consonant most frequently affected is [k]. Following this loss, the [u] has changed to [o], but the optional form with [u] is as frequent (see morphemes 201, 227, 287). The optional full form, including consonant, is occasionally found in this position, or when the word serves as an object of the verb. For another illustration of loss of medial consonant, see 260.

2. All words spoken in isolation have a minimum of two moras, whether composed of two juxtaposed vowels, or vowel plus consonant plus vowel. Prediction of included (phrase) forms can best be made (when they can be made at all) from the two-mora forms, but two-mora forms can never be predicated from one-mora forms. Action in tonemic sandhi is likewise best predictable from the full form. For these reasons, the two-mora forms must be considered as basic[3] if one wishes a simple description of Mixteco phenomena. Any one-mora form, from this point of view, is phonologically incomplete; phonetically it leans for its pronunciation, always, upon a preceding or following form. This phonological dependence is shown in the text by hyphens. (It does not indicate compounding, nor affixation, as the total structure will show, since many forms which are phonologically dependent upon a neighboring morpheme are grammatically most directly linked to or modified by another [or others] in the layers of immediate constituents). -na therefore is an enclitic, phonologically dependent upon žúkan.

A relatively small number of morphemes, however, have never been related to full (two-mora, dissyllabic) forms. In these cases, special processes of conditioned change in proclisis or enclisis have so obscured the relationship that the forms can now only be related by suppletion, or, as in this instance, the two-mora form has either been lost, or the relationship with its full form so obscured that the full form has not yet been found. Note in the text, that no two-mora form is postulated for this particular item.

Its basic meaning is *just one more*, indicating definite limits, as seen in phrases like kuní-ná əən-nà *I want just one more*. As part of a minor construction (with žúkan) filling the modal position, it takes on an abstracted meaning of *definiteness*, or *right then*.

3. te- is seen in basic slow form, or hesitation form, tee. Accompanying the modal position, described under 1, the basic meaning of the morpheme can be almost completely ignored. Initial in a phrase, or as

[3] Mixteco has been described by J. de Angulo as monosyllabic, presumably because of the number of single-mora items, and two-mora items composed of juxtaposed identical vowels, found in rapid speech. Compare his The Development of Affixes in a Group of Monosyllabic Languages of Oaxaca, Lg. 2.46–61, 119–23, (1926), and The Linguistic Tangle of Oaxaca, Lg. 1.96–102 (1925). The present development from dissyllabic morphemes to monosyllabic sandhi forms might tend toward a monosyllabic language, were it not for the counter tendency for enclitics and proclitics to develop multimorphemic words, by way of compounding.

a relator of phrases, however, it indicates a transition of thought or action, and can be translated *and* or *then* or *but*, or even ignored for English translation; many instances of this usage will occur later in the text (e.g. 7, 16, 22). It is one of the few items in the language which cannot yet be related either to a full noun, or verb, or adjective used normally in its various positions (cf. 212).

4. Mixteco verbs have with their basic stem form the basic meaning of a potential, incomplete, semantic aspect. Thus, kaka means *will walk*, or *is going to walk*, or *is yet to walk*, or, with appropriate accompanying words, *would have walked*, etc. If a preceding morpheme nìl (contiguous or noncontiguous to the main verb concerned) is added, whose semantic aspect is *to be finished, complete*, then in conjunction with kaka, it gives the translation *did walk* or *walked*, or *will have finished walking*, etc. The morpheme nìl carries with it the power to palatalize in one of a variety of ways an arbitrary list of words, all of which begin either with [k] or with [kʷ], and of which kaka is one example: thus, nì-hika *walked*. If, instead of nìl, the morpheme preceding the main verb is náá *insist*, the resultant form is ná-káka *will walk!* or *let walk!*, since náá does not cause palatalization, but, on the other hand, does cause a change of toneme of the following word. This particular set of tonemic changes is always caused by words which (like náá) are basically high high; another illustration of this type of perturbing word can be seen in number 14. The form of kaka as seen in the text (i.e. híka) acts as if it followed a morpheme which combined both perturbing and palatalizing powers, since on the one hand it has [ka] changed to [hi], and, on the other hand, the mid toneme changed to high. Further, this palatalizing and perturbing factor may transfer its effect to a morpheme earlier in the phrase, if various other morphemes precede kaka which would also come between kaka and nìl or náá. All these facts together make it appear as if a structurally present morpheme preceded and changed the basic verb, even though this interfering morpheme has neither consonants nor vowels; this morpheme with zero phonemes but palatalizing and perturbing power could be symbolized as [⁺——ʸ], and would have a meaning of *is in process*; the translation of its combination with kaka would then be *is walking*, and so on.

The various types of palatalization which occur after ⁺——ʸ and nìl can be briefly illustrated as follows: without palatalization of any kind, kunu *to weave*, kúnu *is weaving*; with spirantization of the velar stop, kača *to dig*, háča *is digging*; with change of velar stop to [ž], kahi *to eat*, žáhi *is eating*; with spirantization of initial consonant plus change of first vowel ([a], or [o], or [u]) to [i], kaka *to walk*, híka *is walking*, kùči *to ripen*, híči *is ripening*; with similar change of velar stop, and change of both vowels (rare), koʔo *to drink*, híʔi *is drinking*; with palatalization of the second consonant ([s] to [š]) and both vowels (rare), kusù *to sleep*, kiší *is sleeping*; with change of both consonants and both vowels plus added [ʔ] (rare), kuù *to die*, híʔì *is dying*; with change of velar to glottal stop, and change of first vowel (rare), koo *to exist*, ʔíó *is in existance*; with spirantization of labialized velar, kʷaʔnu *to grow*, háʔnu *is growing*; change of labialized velar to glottal stop, and replacement of medial nasal by final nasal (rare), kʷiñi *to stand upright*, ʔíin *to be standing upright*.

The tonemic changes are by no means always substitution of a high for a mid toneme. When they are in the grammatical position just referred to, morphemes with basic toneme combinations high high, high mid, high low, and mid high, are never changed. On the other hand, morphemes with different basic types are perturbed as follows: mid mid to high mid (see illustrations in the preceding paragraph), with morphemes of type CVV having optional change

to high high, as in kee *go away* to kée or kéé *is going away*; mid low to high low, in structure CVV, CV?V, or CV?CV, but to mid high with structure CVCV, ka?àn *to speak*, ká?àn *is speaking*, but kunì *to see*, hiní *is seeing*; low high to high high, šìkó *to sell*, šíkó *is selling*; low mid to high mid, kàan *to become adapted*, káan *is adapted*; low low does not occur as a basic morpheme type. This particular set of perturbations is conveniently given a label, say standard tonemic shift, since it is the most basic to the language, and demands constant reference.

It will be noted presently that apart from this one situation, that the same set of standard shifts occurs with extreme frequency, as a mechanical set of changes in sandhi, without reference to the principal form classes of the language (parts of speech: verb, noun, adjective), and without affecting the meaning of the words concerned. This fact contributes one more bit of supporting evidence to the conclusion that the change from potential to durative aspect is caused by a separate morpheme whose vowels and consonants are supressed in an extreme type of abbreviation, rather than being caused by changes of stem consonants or vowels or tonemes as a morphological process deeply imbedded in the structure of the language.

The verb is not closely related in its immediate constituents (layers of grammatical relationships[4]) to the preceding enclitic te-. Rather, the first structural break in the phrase te-híka kuu ?isò is between te- and the remainder, following which híka is closely related to kuu, so that ?isò comes off with the second structural layer; it should be emphasized upon evidence such as this, that proclisis of a form does not represent close grammatical association with that form, but only a loose and often optional phonological (or sandhi) one.

[4] For layers of immediate constituents and discussion of their technical relations, with English illustrations, see K. L. Pike, Taxemes and Immediate Constituents, Lg. 19.65–82 (1943).

5. One of the most characteristic constructions of Mixteco is a main verb modified by a following verb, noun, or adjective, in such a way as to create a nuclear verb phrase which functions much like an unmodified verb. The meaning of the second position in the construction is modification of main construction-head verb by the characteristic action of the subordinate verb, or by the nature or abstracted characteristic of the subordinated noun, or by the quality of the subordinated adjective. The combination of verb plus subordinated word makes a type of construction which here, because of its tightness of relationship and unity as a head for further constructions, can conveniently be called a close-knit verb phrase. Close-knit noun phrases are composed in a similar way of head noun with subordinated verb or noun or adjective. Certain subtypes of noun modifiers undergo a tonemic change to indicate that it is the characteristic of the underlying object rather than the object itself which qualifies the verb or noun head. (Compare 161 and its commentary.)

Item 5 here is one of the verb-modifying types, with a further reservation: there is a tendency for the modifier to become specialized semantically (as well as tonemically) and to loose direct relationship with its originating regular form: as a later step, the modifier may appear only in that syntactic position, and loose completely its normal meaning, so that a native speaker cannot give a separate meaning for the modifier, but only for the head word and for the entire close-knit phrase as a unit. The phrase híka kuu approximates this situation, since most informants in the locality will shrug their shoulders if asked the meaning of kuu, but readily give a translation for híka (*walking*) or híka kuu (*walking about*); the simple deduction that kuu means *here and there* or *about* is not supported by use of that form with that meaning in other contexts. In this case, it would prove impossible to determine whether kuu is basically a noun,

verb, or adjective, except that the old man who told the story also uses a form not present in the speech of my younger informants: kúu kúu (tuku bá?ù) (*the coyote again*) *walked here and there looking carefully about*; this data, in conjunction with many parallels of verbs acting thus as modifiers of verbs makes probable the interpretation that kuu is basically a verb. In some cases, however, even this dubious evidence is unavailable. Thus, in the close-knit noun construction ko?ò kúù *insense burner*, native speakers readily identify ko?ò as *bowl*, but are utterly incapable of postulating a meaning for kúù.

One might well ask why close-knit noun or verb constructions should not be called compounds, in the cases in which one of the items has lost its isolated meaning and usage. The answer is twofold: on the one hand there are scores of instances of the simple juxtaposition of two free forms (each with its full basic meaning) which completely parallel this construction, and, on the other hand, absolutely no special phonological characteristics to distinguish those phrases which have special semantic features from those which do not. With ko?ò, for example, one may find ko?ò ⁿdéžu *bowl of* (full of) *food* (with ⁿdežu, an extremely frequent head of noun constructions elsewhere), in which the accentual and rhythmic features are the same as for insense burner. Many examples, especially of the noun constructions, will occur in the text: note for example the frequent use of žaù kaba *cliff hole* (words 20–21).

Vowels which are of the same quality and have the same tonemes in juxtaposition, as here in kuu, form phonetically long even vowels (not rearticulated ones). They have to be analyzed as two phonemes, not a single long vowel, on the basis of analogous two-vowel groups such as [oa, au, io] (which can be seen in žóan, žaù, and hio: morphemes 1, 20, 256), and also because rules for tonemic interchange such as from kuu to kúu can only be conveniently described and predicted if the separate moras are handled as independent vowels; in this respect, a morpheme of structure CVV acts (with some special subrules) like morphemes of structure CVCV, so that words of CVV type can be said to contain a medial zero consonant or, more convenient still, can be described as having two phonemic syllables. When, on juxtaposed vowels of equal quality, the tonemes of each mora are different, a phonetic syllable pulse division can often be heard, as in kúu.

6. The word for *rabbit*, ?isò, is one of the most interesting to watch throughout the text since it occurs so frequently. Phonologically, one may often see it perturbed to ?isó. Grammatically, it can be found as subject (6), head of locational construction (15), possessive modifier of noun head (83), object of verb (98). These are some of the normal uses of the average noun, rather than usage in positions restricted to a few nouns with accompanying change of meaning under the pressure of those positions.

7. This is a very normal use of te-. It can be translated by almost any type of English conjunction or adverb, if the specific context permits. Here it can be rendered *then*, *and*, *next*, etc. Compare its special usage described in 1, and lack of basic form as mentioned in 3.

8. In hesitation forms, in narration, ni- often becomes nil. Occasionally the narrator will begin a sentence with nil, stop to think of a following verb, pause, and begin over again with a rapid proclitic form ni-. If the hesitation form occurs directly after te-, the two tend to combine as proclitic and enclitic, into te-nì; after saying this much, and hesitating, the narrator may begin over, but more often procedes without doing so.

The word is not found elsewhere than in the grammatical position illustrated by this phrase, in which it precedes the main verb, although various items can come in between the two, as will be seen later. Since it does not occur in other positions, nor in isola-

tion (except in hesitation), it tends to have no strong isolated meaning. Its meaning deducted from phrases is *to complete* or *to be completed* or *finished* (not past time, since it is found in such phrases as žakù-nà tè-nì-kuu *a bit more and it will have been completely finished* [in the future without need of reverting to it again; if it were tè kuu, it would be temporarily finished in the future but without the same finality]).

In my early investigations I considered this morpheme a prefix (and the pronominal enclitics as suffixes, etc.). This hypothesis proved untenable for various reasons: In slow speech or hesitation the morpheme has the phonological requisites of a full word, since it then is found with two moras. More important, it is not bound tightly to the main verb it modifies, since morphemes of full phonological and semantic character which give every evidence of being free forms may come between it and the verb. Certainly in meaning, and apparently in a structural analysis of layers of immediate constituents, ni- modifies the verb head as a whole, not just the main verb, even when the verb head is loosely put together of three or even four words, so that if ni- is a prefix, it is a strange affair which enters into construction with only the first of a number of elements which it modifies. Finally, by parallels with similar problematical elements, the morphemes which might prove to be bound pronominal suffixes would, if treated as such in conjunction with prefixes like ni-, force into close bound words large strings of morphemes which are unwieldy, apparently free and unbound, and certainly not homogenous nor structurally like word units of languages with obvious affixation. (For positional limitation of the enclitic pronominal forms, see 39; this limitation further removes them from treatment as suffixes.) In this text, for example, any consistent procedure following out the implications of considering ni- as a prefix and -tə̀ as a suffix would link into single words, groups of morphemes such as 300–305: te-nì-ku-kʷíʔà ʔinɨ-tə̀ *and the snake was very sad*, and ultimately, by parallel pressure, 188–192: te-nì-kaʔàn tuku ʔisò *and the rabbit said again*. As a matter of fact, in an earlier text,[5] working on such a hypothesis, I attempted that type of analysis, with (inconsistent) results fantastic from the point of view of noun incorporation in the verb.

One is forced, then, to describe ni- as a separate word, but one which is phonologically in a proclitic form, dependent for its pronunciation on the following morpheme, and specially limited to this particular subordinate position in the verb phrase. Nevertheless, a quantity of such morphemes and specialized positions in the language gives to Mixteco the appearance of having no real boundary between morphology and syntax, between bound forms and free forms, between words and phrases—and this impression is greatly enhanced when, as seen in the discussion of item four, the phonemes of such an elusively defined morpheme can disappear altogether, and leave only the weird effects of palatalization and tonemic perturbations behind, while preserving order, and position, and meaning, with its ultimate analysis as an independent free form which cannot be found.

It becomes best to refrain from postulating, as a starting point in writing a grammar of Mixteco, any division into Morphology and Syntax, and to pass directly into a discussion of the particular positions in which morphemes occur, relationships between the positions, meanings which these positions carry, lists of morphemes which occur in specially limited positions, and the semantic changes which the basic forms undergo.

As an aid to the inductive study of some of the positions which can be seen in this text, a summary in chart form has been presented (pp. 11a–b) to delineate the basic noun, verb, and objective construction types which appear throughout the whole.

In the study of a language type such as

[5] K. L. Pike, in Investigaciones Lingüísticas, Tomo IV, Nums. 3 and 4, pp. 262–4 (1937).

this, it becomes apparent that some of the traditional duplication of terminology between morphology and syntax is highly artificial and unwieldy, when similar grammatical function is given different labels[6] merely because it appears on a different layer, or even a different type of layer, of analysis. In addition, it emphasizes the need of an initial approach to grammar which has as its underlying postulate the innate primacy of positions of items with the meaning of the position overlapping on lexical meaning of items. Next[7] the relationships between positions (with their relationship—constructional—meanings), may be postulated as

[6] Lg. 19.76 (1943). I have briefly discussed some samples.

[7] Results quite similar could be achieved by reversing the order of these first two steps, just so long as in each case both of them precede the one given here third (i.e. before the morphology-syntax division). It might be argued that the difference depends upon which comes first—the hen or the egg, inasmuch as positions might not occur but for relationships which contain them, nor could relationships occur without having the content of positions to be related. After testing both procedures, the one given here has proven most useful to date, for the following reason (material which I hope to present in a more amplified form elsewhere):

In a large phrase, each of the immediate constituents, i.e. each member of the relationship, has a unit function within that relationship, whether the member is simple or complex. For example *Tom* and *Big Tom* both function as subject in *Tom likes apples* and *Big Tom likes apples*. Now since *Big Tom* likewise has members of an internal relationship—*big* in modifying position and *Tom* in modified position—it is evident that a relationship as a whole can function as a unit in one position of a larger relationship as in *Big Tom likes apples*. Further, a simple item uttered by itself also has a unit function, which has to be defined, initially in an investigation (before enough of the language is known for definition in terms of the internal linguistic structure, at least), in terms of the physical environment. Thus, *tree* and *run* uttered by themselves each have a function by themselves, although the physical environment in which they are uttered (including gestures of pointing or running, and so on) indicates that each has a different kind of functional contact with that environment, which might be defined tentatively as labelled object versus labelled action, even although final description of the function of these items can only be made after comparing various internal relationships in the particular linguistic system (here English), the particular relationships within that system, the positions within those relationships, and lists of items which can fill those positions.

Granted a unit function for each of two simple items uttered by themselves, and separate unit functions for each of those same simple items as separate members of a relationship, and then a composite unit function of that entire relationship (composed of the two small members) when it occurs as a single complex member in a larger relationship, one may deduce that the basic characteristic of a large complicated relationship is not its internal structure as such, but rather its total function as a unit in relation to the physical and linguistic environment in which it is uttered. Only after its function as a totality is stated, would it then be pertinent in a descriptive order to set forth the internal structure, including the relationships between the immediate constituents, of the complex phrase.

In practice, however, it often proves convenient for mnemonic reasons to give the total function of a complex item a label which draws on a lower layer of analysis (that of its first immediate constituents) for descriptive material for creating the label. In the end, this may prove a costly saving, since the labelling of a top layer and function in terms of a lower layer and function steals the source material for labelling, in due course, the lower layer; then, when the lower layer itself must be labelled, similar terminology must be more or less duplicated (which seems to carry the ear marks of an incorrect analysis), or source material must be drawn from a still lower layer (which produces the same difficulties for that layer); until, on arriving at the ultimate constituents (or words, if one is not describing bound forms), there is no adequate way to avoid duplication of terminology, or else the positional function of simple items is drastically obscured (so much so, that their positional function might even be denied, and it be affirmed that only relationships exist since everything would seem to have been described about the simple forms already).

The alternate possibility mentioned at the beginning of this note—the starting with internal relationships as primary, rather than position or total unit function in a position—tends to fall into the errors just described, but as an inherent weakness in the analytical system rather than as a more superficial (but decidedly difficult) problem of

descriptively important rather than an attempt to start with a basic division between bound forms and free forms[8] or even with parts of speech (since the analysis of these latter basic form classes is made by finding restricted lists of words which can occur in specific designated positions having specific relationships to neighboring positions with which they enter directly into construction as immediate constituents of the constructions). Then, in the next stage of grammatical theory, it may at times be observed that the various positions may be either loosely related (in which case each position might contain items which also occur in absolute position, i.e. free forms) tightly joined or related (in which case at least one of the positions might contain items which never occur in absolute position, i.e. bound forms). For example, English single-morpheme nouns comprise a list of items which can come in subject position in a predication or in preplural position in a relationship between a numerically tight-bound modifier and its preceding construction head, et al.

One further phonological fact needs to be mentioned about ni-. The general tendency of morphemes of structure CVV is to loose the second of the two moras. Assuming that this is also the case with nil̀, a mid toneme would be basic to the proclitic (as actually seen in 178). Following te-, however, or preceding a low toneme, the ni- tends to be perturbed to nì- (cf. 8, 17, 148); the rule has not yet been completely worked out on this point. Following a perturbing morpheme, the proclitic is changed to high (cf. 27, 175).

9. ke^{n}da is a normal verb form, head of the construction of the verbal part of the sentence.

10–11. kətə often is used in proclitic form with a noun following it, for names of animals. Frequently, as here, it is perfectly optional to use it or not: ʔinà by itself is frequently used. This reflects a common construction of the language, in which a general noun takes first position, as head of the construction, and then a more specific noun modifier follows it. The semantic relationship varies considerably and could be translated X of type Y, or X of characteristics of Y, or X made of Y, etc.

With morphemes of the type CVCV, the first syllable tends to be lost, if abbreviation takes place. In this position, with this particular word, abbreviation is frequent, but not universal nor obligatory; with most words of CVCV type, abbreviation is rare.

Before front high vowels or palatal consonants, the [ə] usually changes to [i]. Compare saà or tə-saà *bird*, with ti-žòʔó *flea*.[9]

A further obscuring of word boundaries or morpheme boundaries can be seen in this latter type of word, since ti- plus a morpheme

labelling, since special devices such as zero relationships (or relationships between the phonemic forms indicated by the segmental phonemes and those of intonation, etc.) must be used to describe single morpheme utterances, or, ultimately, single morpheme constituents of complex utterances.

[8] It would appear that to a considerable extent it would eliminate the difficulties of analysis of such a form as *the I don't want to's* (*of a spoiled child*) since, instead of trying to decide whether *the I don't want to's* is one word (because it has a suffix) or several (because of the presence of obvious free forms), it would have analyzed the second position, which in this instance contains a pluralizer, and the first position, which can contain any item whatsoever that can be pluralized; further, a list could be made of specific items found in position before the plural—the list to be subdivided into (a) grammatically simple forms, which here would be single-morpheme nouns, and into (b) complex items; the complex items of (b) to be further subclassified according to the relationships of their immediate constituents, which, in turn, are determined by the basic positions and relationships between positions which they contain. In other words, a positional analysis could first of all cut down through the syntactic-morphological boundary, and then, later, the free-form bound-form distinction (also extremely important to English, but independently operating, and not quite as innately essential as the positional characteristics) could be superimposed upon it with some inconsistent or overlapping residues where necessary.

[9] For this observation I am indebted to my colleague Mr. Donald Stark.

beginning with [ž] may optionally and frequently produce [č]—in this case, optionally čò?ó. kətə in full form is a regular perturbing morpheme, causing the standard perturbations described under 4. Note that in proclisis it loses this power, or else ?inà would be ?iná. For its usage as an enclitic, see 13.

12. See 4 for analysis of hínu from kunu.

13. kətə is a member of the subgroup causing the standard tonemic shift, but as an enclitic it retains its perturbing power only when it has its own low enclitic toneme: after a perturbing morpheme, -tə̀ is changed to -tə́ and loses its power to perturb morphemes which follow it. In the instance here, the following morpheme is already high high, and hence unperturbable. For changes caused by -tə̀, see 33, 75, 81, 144, 278; for morphemes unperturbed by -tə́ see 69, 102. The sign [+−±] before kətə indicates that in basic form it is perturbing, but in enclisis perturbs only when unperturbed. The sign is abbreviated in later occurrences in this text.

Tonemic perturbing power of all kinds is ineffective across a pause. Thus slow speech has fewer perturbed tonemes than rapid speech, and morphemes at the beginning of large constructions are less likely to be perturbed than in the middle of them. For tonemes unperturbed after -tə̀, because of intervening pause or slight rhythm break, see 62–3, 139–40, 153–4, 180–1, 262–3.

14–15. This is one of the positions in the phrase which cause some of the most radical changes in meaning. The meaning of the position is something like *the direction, location, or associate feature is so and so.* A number of nouns may occur in this position. Most of them are used in other positions where all normal nouns occur, such as subject and object position, and comprise a group of items relating to parts of the body. The basic morpheme meaning of a body part has, in locational-directional phrase position, its locational relation to the body as a whole abstracted and applied as a locational feature in general. These locators are modifiers of the noun or noun phrase which they precede.

In the directional-locational position:

čìi	*stomach*	becomes *under*
žatà	*back*	becomes *back of*
səkə̀	*spine*	becomes *on top of* or even more abstractly, *concerning, about*
?inì	*insides, heart, stomach*	becomes *inside of* (see 43, 81, et al.)
nuù	*face*	becomes the most common of all in ordinary speech *on the edge of, to, at, toward*
?ičì	*road*	becomes *direction toward,* and is one of the few which is not a body part.
kʷeⁿdá	*account*	becomes *belongs to, has similarities to, is used by;* this is a Spanish loan—cuenta—and is used in other noun positions, as in taba kʷeⁿdá ná-ⁿdé-ó *make out the account and we will check it*; compare this with kʷeⁿdá ña?a kúu *it (clothing) pertains to women.*

Sometimes ambiguity occurs as to which of two words is the head of the construction. Thus, kani-ná čìi-tə̀ means *I hit the animal in the stomach,* if čìi is in object position in the phrase (after kani *to hit*) and head of a noun phrase before the possessive modifier *animal's*; the same words mean *I hit underneath the animal* (e.g. something on the ground beneath a horse) if čìi is a locational modifier of the following -tə̀, with the two words constituting a locational phrase after the verb, rather than being its object. Similarly, žáhi-ná səkə̀-tə́ means *I am eating the meat of the spinal section of the animal,* if səkə̀ is in object position to the verb with possessive modifier -tə́; it means either *I am eating while on top of the animal,* or, in the more abstracted and idiomatic usage, *I am making my living by using animals,* if səkə̀ is locational modifier of -tə́, and the whole is in locational position in respect to the verb.

See also 20–1 for absence of locator with a

phrase which is nevertheless in locational position.

With this as a background, one can then describe híín as a noun meaning *instrument*, as in nà-híín sá?a-žó *what-instrument do-we*, i.e. *what instrument should we use*, which is most frequently used in locational position, as in this text, translated *with*. Further, the noun is positionally defective, since it has not been found in object position or subject position.

híín has basically high high tonemes. Words of this formation are of a perturbing type, but of a special subgroup which never perturbs the enclitics -de *he*, -i *child, people*, and -ña *she*, and which also has special rules for the enclitics which are basically low. These characteristics separate basically high high morphemes (but not those which become high high from a previous perturbation) from other perturbing types.

Notice in 15 that basic ?isò perturbs by the standard change for its type to ?isó.

18. Certain verbs may have a consonantal change involving some type of nasalization; the change of meaning involved implies resultant duration of action. Because of its analogy to previous analyses of stem changes (4; see also 10) it appears best to symbolize this by ——^{n} + kàbə. The position from which the nasalizing influence is applied is directly before the head of the verb phrase, in contrast to the morpheme +——^{y} which comes early in the phrase with various potential positions between it and the verb head, as has been indicated diagrammatically on 116. The two modifying morphemes may be superimposed together upon the stem, thus: +——^{y} + ——^{n} + kàbə produce ^{n}dábə, which occurs in 31; both meanings (i.e. of entering continuously or repeatedly and staying there hiding) can be noted.

Various types of change result from this nasalization; compare the following:

čaà-ná *I will return* (*briefly, or without reference to duration of stay*) but ^{n}jaà-ná *I will return* (*to stay for considerable time after a long absence*)

kasù *to close* (transitive), hasú *closing* (transitive), ^{n}dasú *to be in state of closure*[10]

ku?nì *to tie*, hú?nì *tying*, nu?nì *a bundle* nú?nì *to be in state of being tied*

kuu *to be*, kúu *is*, ^{n}duu *to be turned into, to become*

20–21. Notice that this two-word phrase is in locational position after the verb but that it lacks the specific locator ?inì. When the context is clear, the locator is often omitted.

Within the smaller locational phrase, notice that žaù (with standard perturbation to žaú) is the head of a construction whose modifier is another noun: kaba *cliff*.

24. Cf. 4.

26–34. Notice that this phrase is in object position in the larger phrase of which it is a part. Phrases of a type which occupy a single position in a larger phrase are very frequently nominalized by using as a head the morpheme haà, which is itself a noun, and which is modified by the entire following phrase, in this case by ní-ku-tənə̀ beltá ^{n}dábə -tə̀ žaú kaba. Any noun may be modified by a following noun (20–1: žaú kaba *cliff hole*) or verb (čà-žée *a man who eats* [*a lot*]) or phrase (66–67: hà kéé-tə́ *thing to eat animal*, i.e. *thing for the animal to eat*).

Although any noun may thus be head for verb or verb-phrase modifiers, none is used with the extreme frequency of haà, which serves to throw phrases into nominal form ready in turn to occupy object position, subject position, or position for modifying nouns, verbs, or entire phrases, and so on. (It is interesting to note that often these must be translated in English by abstract nouns, or gerunds.)

[10] Some cognate transitive and intransitive stems differ only by their tonemes. The rule for relating them, if that is possible, is yet to be determined. Compare: nì-saka-ná, *I planted* (transitive); nì-sakà *was planted* (intransitive); tə̀ən *grasp* (transitive); tə̀ən *take root* (intransitive.

In addition to its frequency, haà differs from other nouns by being partially defective positionally, and itself seldom or never serves as an ordinary subject or object; for *thing* in such positions, ⁿda-tíñu is found. On the other hand, note haà being modified in the special case na-hà *what thing, what reason, or uncertainty thing*, i.e. *why*. In slow speech or normal speech with other informants the two-mora form sometimes appears.

In this particular context, haà is perturbed by preceding koò, and itself perturbs nito ní-.

29. Numerals or numeral-like words, collectives, and distributives, are nouns which may occupy a prehead numerative position modifying another noun, or may appear by themselves as subjects, objects, and so on. In this particular instance (29), tanà modifies beltá. Two other positions may in turn modify the numerative position, but are not illustrated in this text: a definite enclitic may follow and modify the numerative, or a distributive may precede and modify it. Thus: ⁿde-tàx́á-ni kəbà *each-all-definite day*, i.e. *every day* (here, ⁿde- [or optionally ⁿdə-] is a proclitic form of the noun ⁿdəʔə *everything* or the verb ⁿdəʔə *to be finished*, tàká is a noun *all things*, -ni *exactly that* [cf. 162] has no full form yet discovered); nù-ʔúʔùn-ni kəbà *in five days* (⁺nuù *face* [cf. 14], ʔuʔùn *five*, perturbed). These can be added together (substituting taʔàn *sample* for tàká): ⁿde-taʔàn-ni nù-ndé-ʔúʔùn-ni kəbà *each group of every five days*.

31. Explained in 18.

35. By analogy with other nouns in this open modal prephrase position (žóan 1; bina 181) nú- would appear to be a noun also, *hypothesis*, although it is defective positionally in that it does not occur as subject or object like the other two nouns just mentioned. There is a second usage, a close modal postphrase position, which probably gives the equivalent full form: sáʔa-ná núú *do-I hypothesis*, i.e. *I would have done it but didn't [because . . .]*. In this position it frequently assumes an optional enclitic form: sáʔa-ná-nú. For close modal prephrase position see 47.

36. sáá modifying nú- gives together with it an impression of conclusion, *that being the case. . .*

38. Abbreviation of CVʔV gives CV in proclisis before a main verb, but abbreviation of the main verb itself is much more rare, and, as here, the [ʔ] is sometimes retained. In slow speech the full form kiʔìn reappears, and occasionally it appears as an optional form in rapid speech.

39. The full form of the inclusive first person pronoun is žóó. This form appears under emphasis in any noun position, such as that for the object, or subject, or as an especially emphatic subject in emphatic position preceding instead of following the verb (if the full form precedes the verb, the enclitic form may or may not follow the verb at the same time).

The pronouns are regular nouns which form a special group primarily because they have enclitic forms in certain positions (not all of them as yet analyzed)—for example in subject position if they themselves are not modified by a possessor, or in possessive position if unmodified themselves; the full forms are normally used if modified by a following morpheme; in all positions under emphasis, the full forms tend to reappear. Some of the enclitics are best described as related to the full form by suppletion. On the other hand, the special characteristics of enclisis of noun forms are not limited to items which substitute for other forms. Thus, ⁿduča *water* in similar positions (e.g. subject or object) becomes -čà; žúkan, as will be seen in 125, becomes -ún optionally, as a noun modifier, and so on. Thus a class of pronouns as such can by no means be set up as basic to the language. For convenience, however, the special substitutes which have enclisis can be listed as follows:

⁺žóó	becomes ⁺-žò *we, ours* (inclusive) 42, 46, 50, 133, 211
náá	becomes -ná *I, we, my, ours* (exclusive, polite)

níí	becomes -ní *you, yours* (singular or plural, polite)
čàa	becomes by suppletion -de *man, he, they, his, theirs* (polite), 124, 51, 54, 128
⁺ña?a	becomes ±-ña *woman, she, they, her, theirs* (polite)
ruù	becomes by suppletion -rì *I, we, my, ours,* (exclusive, familiar) 253, 247, 258.
⁺róó	becomes ⁺-rò *you, yours* (singular or plural, familiar)
⁺sùčí	becomes by suppletion -i *child, he, she, it, people, theirs* (familiar)
⁺?i?žà	becomes ±-žà *God, saint, idol, God's*
⁺kətə	becomes ±-tà *animal, thing, animal's* 13, 68, 147, 286

All enclitics tend to have different tonemes and tonemic rules than their full forms.[11]

Compare the following items in order to note the positions in which the enclitic forms appear:

žá?a ká-ⁿjaà-i (*the*) *child is seated here*
žá?a ká-ⁿjaà əən sùčí *one child is seated here*
žá?a kúu be?e-i *this is* (*the*) *house* (*of the*) *child*
žá?a kúu be?e sùčí lúlí *this is* (*the*) *house* (*of the*) *little child*
žá?a kúu be?e sùčí-ná *this is my child's house*

(This limitation of the positions in which the enclitic forms occur would make it difficult to treat them as suffixes. Compare 8 for further discussion of the prefixial problem.)

The nouns whose meanings are to be translated by first or second person, do not take modifiers following them, (and in this they differ from all the third person forms just given), but may be qualified either by the affirmation of an independent verb, or else may be preceded by an adjective to join in forming a special type of affirmation in the durative aspect (other aspects must be accompanied by verbs): ?íó ⁿdá?ú-žò *we are poor, in a bad plight* or simply ⁿdá?ú-žò. The short form of ruù (i.e. -rì) does not occur in object position.

In this particular form, 39, there is even further abbreviation than is customary. The loss of the second vowel of ki?ìn and the loss of [ž] has allowed the final nasalization to pass over to the [o] which is all that remains of žóó. In 42, the [o] is likewise all that remains, but there is no nasal in the preceding morpheme to affect it. Compare 50 for an intermediate situation. These extreme abbreviations are optional, and in speech which is a bit slower, the form -žo tends to reappear.

40–41. Some verbs have for potential aspect a phrasal form comprised of kuu *be* (potential) plus the morpheme form which can be found in the durative aspect minus the perturbations described in 4, so that the basic form is located by choosing the morpheme as in the potential (nonperturbed and nonpalatalized) but omitting kuu. In 85, ⁿdátu occurs, as would be expected, but proves nothing since ⁺hà- would perturb *ⁿdatu to ⁿdátu anyhow.

45. Compare this abbreviation type with those described in 39. The tonemic form is that of the durative (for which see 4).

47. Notice that here núu is in a different syntactic position from that seen in 35. It is in a closer relationship to the following phrase, a close modal prephrase position, and does not have te- between the two.

48. maà as a negative is used only with the potential. túu occurs usually with the durative. When túu does occur with the potential, the semantic difference between it and maà is not yet clear.

51. For -de (here in object position) see 39.

53. -žò becomes mid only after perturbing morphemes which are mid mid and which belong to the perturbing subclass. Compare 42 where -žò is perturbed to high following a nonperturbing mid mid morpheme. In both forms it has caused the perturbation of the following morpheme.

[11] For a discussion of the differences in tonemic usage of these forms, see Tone Languages.

58–62. Judging by its frequency of use, one of the most esthetically satisfying of all Mixteco sentence patterns would seem to be the one illustrated here. Two verb phrases in balance complement each other. (Compare the balance in English going—going—gone.) Oftentimes the second adds no new semantic element, but merely stylistic fullness. Note, here, that the second phrase (kʷa?àn-tɔ̀ *the animal goes*) includes motion, as did the first (te-nì-keⁿda ?isò *the animal came out*), but not a very specific addition (not direction away, as it might seem in this one context; compare 79, 80 where the words are the same but the direction diametrically opposite).

The same general structure gives the appearance of simple parataxis when the verbs differ considerably in meaning, as in kee kuní *eats, wants*, i.e. (*he*) *wants to eat* but the construction strikes more deeply into basic Mixteco structure than that, as can be seen by the fact that a dual affirmation is often modified as a whole, not just in its parts, in various ways: in 75–83 the dual affirmation modifies the haà (75) which in turn is the near-empty morpheme serving as head of the expression in object position; in addition, the locational phrase of 81–3 modifies the entire dual affirmation preceding it (76–80). In 57–62, te- must be analyzed as applying to the entire following dual affirmation.

The simplest form of a dual affirmation is composed of two verbs. Note kee ki?ìn *go away go*, i.e. *he has gone*; kee kuní *eat want*, i.e. *he wants to eat.*

63–65. This does not form a triple affirmation, since a pause separates it off from the dual affirmation which precedes it.

Morpheme 64 is head of the premodifying 63. Main verbs, like ⁿdúkú here, may be preceded by an auxiliary-motion position; only a few verbs of motion may occupy this position, which follows the aspectual morphemes ⁺náá, nìì, ⁺ní-, and ⁺——ʸ, but precedes stative ——ⁿ. In slow speech the full form is very frequent, and natives writing their language are likely to write the full forms of the auxiliary-action morphemes. Notice this same morpheme serving as head of a verb phrase in 61 and 79. The durative of the combination 63–5 would be há-ⁿdúkú-tɔ́, or há?àn ⁿdúkú-tɔ́ since kʷa?àn, according to processes explained in 4, would become há?àn because of the preceding ⁺——ʸ and then optionally be abbreviated. kʷa?àn is unique in a number of ways: it may have a unique imperative form kʷá?án or a completive aspect without nìì.

66. Cf. 26.

66–70. Note the numerative position modifying ladó, and the combination serving in locational position for the entire phrase even though no specific locator is given (cf. 29 and 14). Spanish loans of CVCV structure are borrowed usually with mid high tonemes, as here in ladó. See also 89, ?orá.

72. See 4.

79. See 61.

81–3. Note the combination of locator modifying its head, which is first modified by a possessive noun.

84–87. The short phrase modifies the preceding phrase (75–83), in a position of phrase modifier. For the verb, see 41.

The object position is seen clearly here with ?isò. It contains a full-morpheme object form in comparison to the enclitic object of 51 or the phrase object of 66–68.

88–104. The style here is slightly awkward since the narrator begins the section by describing it in third person and ending it as a quotation. The beginning of the quotation as marked is therefore a bit arbitrary, but certainly fairly close to the actual point of transition in style.

88. The full form naà appears in slow speech. This noun morpheme is positionally defective, in that it is not found freely in subject and object positions nor before adjectives. The usage here is to be first modified by a second noun (?orá, a Spanish loan from hora, cf. 70), and then the short noun phrase serves as subject of the equa-

tional sentence. For object position see 121–2.

88–93. This is an equational type of phrase beginning with the subject, followed by the verb (instead of the reverse order normal to other phrase types), and in turn followed by an equated phrase, which here is of a nominal type already described in object position (26–34). The additional factor is further abbreviation of haà to -à, especially frequent (but still optional) after kuu.

95–96. tɔɔn is head of the verb phrase, with a type of pressure-auxiliary (meaning *pressed close to accomplish the action*) preceding it. The position of ka- is closer to the head than that of the motion auxiliaries (see 63 for a sample of the latter). A two-morpheme form of ka- has not been found, but it has been treated as a verbal item by analogy with others which are more certain.

103. ʔáčí-tɔ̀ fills a postquotative position, used for indicating the source of a statement. The form has a rare type of unique perturbation for the durative, from the basic form ʔačì, and is cognate to but apparently not directly derived from kačì (durative kačí) *to inform, to say*. Often kačì in prequotative position precedes an utterance, with ʔačì following the phrase in postquotative position. For a similar situation with kaʔàn . . . ʔačì see 231, 236.

118. A unique item in that cannot be followed by a subject.

119–20. A motion auxiliary plus main verb (cf. 63–4).

121. See 88. Note that this is a noun head of a phrase in object position. -ún is the enclitic form of žúkan (cf. 1 for an optional full form). In a postphrase modifying position (similar to the position described for núú under 35), with a high perturbation to ná-, plus ún, the uncertainty is increased, so that a request for confirmation may be implied: kiʔìn-ní ná-ún *you are are going uncertainty*, i.e. *are you going?* (Cf. also 212 about questions.)

123. The context would imply that sáʔa is durative, but since basic high mid morphemes do not have their morphemes perturbed by this aspect, the durative and potential forms for this morpheme are homophonous, and therefore no certain decision can be made as to the presence or absence of the durative proclitic.

124. Third person subject, čàa, modified by -ún, in basic form abbreviated to čà-, but still different from the same morpheme -de in enclisis without modifier, in 128. Cf. 39.

126–38. Phrase modifier of the entire phrase 121–5. For its internal structure, compare dual affirmation types described in 58–62.

132. The normal perturbation of beʔe would be to béʔe; ʔinì perturbs no other morpheme yet found. This makes the perturbation here doubly unique.

145–7. Note the position of the modifiers: the noun modifier of quality follows the noun head, and the noun possessive modifier in enclitic form follows that.

154. The translation of this phrase is given by informants as *good afternoon;* nì-ʔini is used independently to imply *it has become late*. No other occurrences have been found, however, of a morpheme meaning *good* which can be related to tà-; tàu is postulated on the basis of usage by other informants of the same community.

There is considerable probability that tà- is an adjective, however, because of the position it occupies and its implied relationship to the verb phrase. Compare with it the phrase bàʔa ni-kúu *good complete is*, i.e. *that is fine*, or the similar phrase with a Spanish loan word, bwenú ni-kúu. In the following set of phrases, notice the specialization of the adjective meaning when it modifies the verb phrase or an adjective rather than modifying a noun: žučì ʂaàn *sharp knife*, kətə ʂáàn *fierce animal*, ʂaàn ñáá *very bad*, ʂaàn kú-sɔ̀ɔ̀ ʔiní-de *very happy he is*. Only a few adjectives are found in the prephrase modifying position. Another one, in addition to tà-, occurs in the text, number

169; in this case also, the adjective is positionally defective, since, in spite of the general tendency to frequent noun modification and rare phrase modification, it has been borrowed from Spanish tanto for use only in the prephrase modifying position and not as a post modifier of nouns or verbs.

160. ná?í is an adjective in the same position just described for 154 and 169, except that the morpheme is first modified by a special type of derived adjective, and by a definite particle, before the entire adjective phrase modifies the verb phrase.

161. Derived adjectives may sometimes be formed from nouns or verbs by a special tonemic change, in which the noun or verb tonemes change to high high, regardless of the basic tonemes of the noun. (There is, however, a special subrule: following morphemes of mid low variety, the tonemic change may optionally and most frequently be to low high instead of to high high.) At the moment, there is no evidence other than the analogy with durative and perfective aspectual formation (4 and 18) to cause one to postulate a phonemeless morpheme causing this perturbation.

žúú would seem to be derived, by the process above mentioned, from žuù *rock*. Semantically, the derived adjectives indicate some outstanding characteristic which is inherent in the related basic noun. In this case, the translation could be given as *silent as a rock*, or, more literally, *silent rock-like*.

The derived adjective can modify an adjective, as just illustrated, or a noun (as in ⁿdežu žúú *thick food* as distinct from ⁿdežu žúù *food made out of rocks*), or a verb (compare kani *hit*, tá?an *comrade*, tá?án *togetherness*, kani tá?án *to trade blows*).

The derived adjective can characterize the basic original noun. Compare the following fairly common phrase forms: ?ió žúú žúù *is rock-like a rock*, or *a rock has the characteristics of rocks*; ká-tɔ́-kʷáⁿgó tɔ́-kʷàⁿgo *has (the form of) crookedness (a) crooked thing*.

162. -ni is an item which cannot be related to a two-mora form. Its meaning is of specification, or definiteness, and can be translated *just that* [modifying nouns or adjectives], or *right then* [modifying verbs], or *nothing else*; all in all, it gives a connotation of emphasis by its definiteness. In position, it modifies the adjective, or verb, or noun that it follows. (For use with numerative nouns, see 29).

163–4. ká-ⁿdee is member of a form class of close-knit verb phrases composed of a verb for existence plus an adjective of position. Compare ku-ⁿjaà, to be in a sitting position. The verb head in both cases has kuu in the potential, but ká- in the durative. The classifications as to whether a close-knit verb phrase of this and related types will have in potential and durative, respectively, kuu and káa, or kuu and kúu, or kuu and zero, are highly arbitrary and irregular. In 170–171 the kuu/kúu form appears with sɔ̀ɔ̀.

169. Phrase-modifying adjectives and this illustration have been discussed in 154 and 160.

170–1. Cf. 163–4.

172. Many verb phrases indicating psychological states are formed by adding ?inì to a verb otherwise quite concrete. The most striking case in this text is *to think* composed of *to repeat*, plus *to hit*, plus *insides* (204–207). This psychological verb modifier occupies a position following the main verb, but may have several other morphemes intervening and more closely related to the verb. No other noun occupies this position (not even the other nouns which, with ?inì, may occupy the locational-directional position, for which see 14).

The particular verb phrase type found here is one of the most frequent with ?inì: a verb head of existence followed by an adjective modifier, giving a close-knit nucleus, and then the entire nucleus followed by the psychological modifier. For one other illustration, in which the post-modified nucleus then is premodified by an aspectual morpheme (nii), see 297–8. For

a longer form, compare nì-ku-səə̀ ʂáàn túku ʔinì koò *the snake was very happy again.*

178–80. Note parataxis to indicate modification of one clause by another, to be translated in this context by *when he arrived.*

181–3. For this modal type of phrase modifier, and use of te- with it, see 1. For the adjective modifier of the head morpheme in this position, see 161.

191. tuku is an adjective meaning *different.* Compare the usages in the following positions: čàa tuku kú-de *man different is he,* i.e. *he is different from us in his habits;* tuku čàa kú-de (with about the same meaning as the other construction but with the adjective in the more rare premodifying position); ni-nà-čakù tuku-de *complete repeat live different he,* i.e. *he came to life, he lived again* (here, the use of tuku as a modifier of the verb indicates, by a positionally specialized meaning, repeated action; the nà- in the same phrase indicates more the renewal of state than the repetition of action). It is as repetitive modifier of a main verb that the adjective occurs here in 191. No other morphemes have been found in this position. It comes before the psychological modifier (seen in 172) but after the main verb or an adjectival qualitative modifier of the verb (seen in 171). Compare the difference in meaning when tuku is a prephrase or postphrase modifier: tuku nì-sáʔa-de *he did it differently,* nì-sáʔa tuku-de *he did it also,* nì-sáʔa má-de tuku *he did it again* (máá is an emphatic noun, with demonstrative meaning, which premodifies nouns).

193. This form is unique, in that in normal groups of three morphemes there is no perturbation of the third by the first. In this respect, ʔəⁿgà acts like morphemes of CVCV pattern, in that in standard perturbation it changes to mid high. The uniqueness of the form consists in the fact that it has that type of tonemic perturbation found elsewhere only within a single morpheme, although this form is presumably derived from ʔəən *one* plus the enclitic -kà *other* (this enclitic is as yet unrelated to a dissyllabic form). Compare the form kuní-žò ʔəⁿgá (which has the toneme of the second syllable perturbed, meaning *I want another*) with kuní-žò ʔə̋ən-nà (in which the first syllable of the regular numeral noun one is perturbed, meaning *I want just one more*). Morpheme 193 is in numerative position modifying 194 (cf. 29).

205. The proclitic na- indicates a renewal of state of the action of the main verb. This renewal auxiliary precedes the main verb but follows the auxiliary-motion morphemes (63). Its position is the same as that occupied by the intensifying auxiliary 95; the two seem to be mutually exclusive in the verb phrase; na- is quite frequent, occurring with many verbs, but ka- is rare.

207. See 172 for the psychological modifier.

209–11. The form of the phrase is nominal, with haà as its head (cf. 26–34), and the whole is the object of a prequotative position. (For postquotative position, see 103).

212. Questions are indicated by no special phrase form, nor special morpheme, nor toneme, nor formal intonation. The context must indicate whether a question is intended, although gesture context, surprised or protesting voice often help give a clue (although even here, they may still be ambiguous with simple surprise or protest). One of the most common ways to indicate indecision, and hence a question, is the arrangement given here whereby an affirmative statement is repeated negatively with or between. (For an English near equivalent, compare to be or not to be [that is the question].) Another frequent question method is to make a statement and then to immediately deny it, indicating indecision in that manner: You have done it. No! (Compare English you haven't gone and done it!) Even morphemes which, translated into English, seem to be interrogative, are deceptively so, due to the translation: the same morphemes are used for statements

with no query implied, once granted that the context is appropriate (as, with a shrug, nà-ún sá?a-de-bi *what thing do he indeed*, i.e. *I haven't any idea what he has done*). With the proper physical context and gestures (e.g. tossing back the head and spreading the palms of the hands outward) this same phrase could mean *what is he doing?*

Since šíí, like tee (3), has not yet been found in the more normal noun, verb, or adjective positions, it may ultimately be necessary to postulate a basic form class of connectives or miscellaneous particles. Even if this be done, it by no means makes the particle class as important to the grammar as the others; since nouns are already known to serve so many functions other than subjects, objects, and so on, evidence may yet be found to prove that šíí also is a noun of a particularly restricted subtype.

222. ?aà is a frequent form in postquotative position; possibly it is slightly less formal and deliberate, or more rapid, than ?ačì.

244. ⁿdé- is here in a close modal prephrase position like nú- (47; cf. also 35) rather than in the open modal prephrase position seen for žúkan (1). In this position, the toneme may be either mid (or low) or high. Apparently, but not certainly, the high toneme is caused by the combination of ⁺—— plus the basic morpheme whose phonemes are more apparent. It is by no means certain that the perturbing influence is ⁺——ʸ, the same as described in 4, because palatalization does not accompany the change; the result is not to modify a verb; and the order is different (occurring before the aspectual position). On the other hand, one can often detect a difference in meaning between the perturbed and nonperturbed forms, in which the high, perturbed, form more frequently occurs in contexts which have something continuous about them; here, for example, the rabbit implies that all his life he has never heard a cliff talk (for ná- cf. commentary for 121).

249. The context might be either durative or potential. The durative form would be ká?àn, as here, but the potential form ka?àn would be mechanically perturbed to ká?àn by preceding ⁺haà, so the form is ambiguous.

252–3. This construction occupies the preverb emphatic position, which generally has a pause between it and the verb phrase which follows it. Note that a normal post-verb subject (257–8) accompanies the phrase. The emphatic item, *I*, and the regular subject, *my head*, are not completely equal. This causes no inconsistency, however, since by subordinating *I* (ruù) to *thing* (haà), the personal-substitution meaning becomes heavily abstracted (even as haà modified by verbs gives abstract noun phrases [see 26]) and the resultant meaning is best translated *as for me...*

254. Cf. 48.

255–6. Cf. 163–4.

260–1. A close-knit nuclear verb phrase, with the verb head hiko modified by the verb kaba. (Compare verb head modified by perturbed noun; illustration given in commentary for 161.) This is one of the characteristic contructions of Mixteco. A verb head may be modified by such a subordinate verb, or noun, or adjective (163–4), and then be modified by the repetitive modifier (191), and psychological modifier (172), as well as by preverb modifiers of various types.

275–80, 281–3, 284–6. The last of these three phrases with haà is in object position to the phrase immediately preceding it. The first of the phrases modifies the complete preceding phrase (269–74), and the second (plus the third, i.e. 281–6) modifies the resultant phrase (269–80).

307–8. After tú-, the completive used is ⁺ní- (high, and perturbing). This makes the morpheme form unique, since elsewhere nìì is nonperturbing, whether or not it is itself perturbed to high; the meaning remains the same, as for unperturbed nìì. Nothing is visible in túu which would cause

either the perturbation of nìì or the giving of perturbing power to it; when not used with nìì, túu is non-perturbing. It seems preferable to state that after tú- that nìì (in an arbitrary unique subclass) becomes high and perturbing, rather than to state that, before nìì, tú- perturbs both the contiguous ni- and the succeeding non-contiguous syllable. (A further complication is that in this case ní- becomes homonymous with a different aspectual auxiliary which is likewise perturbing, and which means *it is too bad that so and so was not done*; the informant insists that the statement here means nothing more than a mere negative assertion, even although the context and the ambiguity between the morphemes might allow for the other also. In contexts where the only possible interpretation is simple completive negation, where the nìì form would be expected, only the high toneme occurs [a low toneme on nì- never occurs after túu] so that 307–9 cannot be explained as the use of the morpheme of unfulfilled advantageous action rather than the one of completed action.)

KECHUAN DIALECT OF CALLEJÓN DE HUAYLAS

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1. Geographic position
2. Vowels
3. Stress and pitch accent
4. Consonants
5. Morphology
6. Suffixation
7. Infixation
8. Vowel ablaut
9. Reduplication

1. In previous papers I dealt with the geographical distribution of the native languages and dialects in Peru, and I also wrote a little about phonetical differences between two or three of these dialects.[1]

The Inter-Cordilleran plateau of the Andes, as it is known, is the most typical Kechuan area in Peru, and it could be divided linguistically into two major regions: the south with the dialectal groups of Cuzco, Arequipa, Apurimac en Ayacucho; and the north with Junin, Huanuco, Ancash and Chachapoyas. This northern region, which was called Chinchaysuyu by the Incas, embraces dialectal groups sharply different from those of the south. The dialect with which this paper is concerned is related to the group of Ancash and it takes the name of the region in which it is spoken, namely, Callejón de Huaylas.

Callejón de Huaylas is the name of a valley about sixty miles long, extending from south to north in the highlands of the Department of Ancash, along the banks of the Santa River. The valley is a narrow strip of land walled on its east and west sides by the two parallel branches of the Andes, the Cordillera Blanca on the east and the Cordillera Negra on the west. Along the valley there are many thickly populated towns of Spanish and Indian people such as Recuay, Huaraz, Carhuaz, Yungay, Caraz and Huaylas, besides the many villages and communities of Indians. The population is estimated to be around 250,000, and most of this is of Kechua-speaking natives. This valley, consequently, is almost isolated by two ranges of mountains closed at both the north and south ends. Linguistically, too, it is surrounded to the south by the Huanuco dialectal group, to the east by the Conchucos group, to the north by the Huamachuco dialect and the part of the coast where once the Mochica language was spoken, and to the west by the group of Vertientes.

The linguistic material on which this writing is based consists throughout of the writer's acquaintance with the Kechuan dialect since childhood. No special account on this dialect or the others has ever been published either in the past or present time. So, it is necessary first to give the general characteristics of it.

There is something harsh in its acoustic effect if we compare it, for instance, with the dialect of Cuzco, but it is one of the most euphonious among all of northern Peru.

2. Vowels. In this dialect the simple vowels appear, quantitatively, in two forms: short and long. Under syllabic conditions, i and u appear in semivocalic form as y and w; thus a^u and u^u appear as ow and uw when followed by vowels; for instance, a'wē *to weave*, and u'wa *louse*. Also ai, au, āi, and āu may appear ay, aw, a^ay and a^aw. In this case the first element of the diphthong produces the second (i or u) and becomes semi-vocalic. The following examples will make these phonetic forms clear: awā *I weave*; awa'nki *you weave*; a'wan *he*

[1] AA 44, No. 3, 1942; Revista del Museo Nacional, Lima, Peru, Tomo VIII, No. 2, 1939.

weaves; qa'yē *I call*; qayānki *you call*; qa'yan *he calls*; wa'qaᵃ *I cry*; waqa'nki *you cry*; wa'qan *he cries*.

Examples of unrelated stems and words differing only in the length of the vowel of diphthong are not rare and serve as internal evidence of the correctness, from the native point of view, of the vowel classification that we are trying to make. The difference is the length of the vowel. Speed of utterance and, to some extent, withdrawal of the stress-accent tend to reduce the absolute quantity of one vowel and to increase that of another, since there are no normally long or short vowels, and the parasitic attachment moves from one place to other, modifying the phonemes. Sometimes there are also phonetical conditions in which vowels normally short become long when dwelt upon for rhetorical emphasis. Thus, wāteᵉ *to raise*, but wa'teᵉ *to tie*; lāteᵉ *to creep*, but la'teᵉ *to stick*; and pa'ni *sister* (man speaking), or pa'niⁱ *my sister*; tu'ri *brother* (woman speaking), and turiⁱ *my brother*.

In regard to the pronunciation of the vowels themselves, little need be said. The a has the quality as the short a of Spanish pan, or the German Mann, while the long āᵃ (barring the parasitic element) corresponds to the a of the English ale.

The e is an open sound, as in the English pet; it is so open, indeed, as to verge, particularly after y, toward a. Also the long vowel ēᵉ is very open in quality, being pronounced approximately like the ei of English their or the ê of French bête; ēᵉ, though unprovided with the mark of length, will be always understood as denoting the long vowel (pseudo-diphthong) corresponding to the short e; while the long ē will be employed, wherever necessary, with the parasitic ⁻ᵉ. The closed e' as in German Reh, occurs very often in the Callejón de Huaylas dialect, principally in the infinitve of many verbs, nouns and adjectives: wi'lʸeᵉ *to tell*; wi'neᵉ *to pour*; wic'qeᵉ *to close*; qa'weᵉ *to watch*; ta'qeᵉ *that*.

The i vowel is about the same quality as in English hit or fit, while the long ī or iⁱ is closer to the ea of English beat, in the genitive case of the nouns ending in i: cu'riⁱ *my child*; wa'rmiⁱ *my wife*; wa'ī or wa'iⁱ *my house*; ki'kiⁱ *I myself*; and in several monosyllables such as tī, pī *who*; nī *say*.

The o is a closed vowel, as in German Sommer, or Sonne as far as the quality is concerned. Words as qon'qo *knee*, in the nouns, become long ō or oᵒ in the genitive cases, as qon'qoᵒ *my knee*; šon'qo, *heart*, šon'qoᵒ *my heart*, and the first person of the verbs ending in oⁱ such as xor'qoⁱ *to take out*, is xor'qoᵒ *I take out*. Here the parasitic element is the i. Very frequently occurs the short open ô, as in German voll, as a primary vowel: wa'qoⁱ *to embrace*; o'lʸqoⁱ *to vaunt*.

The vowel u is very like the English soot, apt to be heard as ū in the endings of the possessive of the nouns and the first person of the verbs. These are: cu'ku *hat*; cu'kuᵘ *my hat*; xa'ku, *mantle*; xa'kuᵘ *my mantle*. But the verbs with a parasitic ⁻ⁱ in the infinitive, become a long ū as the German Ruhe, in words such as wa'nuⁱ *to die*; ku'yuⁱ *to move*; ku'yū *I move*; pu'nuⁱ *to sleep*; pu'nū *I sleep*; a'kuⁱ *to chew*; a'kū *I show*. The absence of vowels of indeterminate quality is noteworthy as showing the clear-cut vocalic character of the Callejón de Huaylas speech. The accurate pronunciation of the diphthongs and the shift of these in long vowels will be much better understood in considering the subject of the pitch-accent.

3. Stress and pitch accent. Generally, in all the Kechuan dialects the stress-accent is associated with the first syllable and the bisyllabic characteristic of the Kechua words is noted with few exceptions of compound nouns and the particular form of certain intransitive and reflexive verbs: ku'takē *choke*; na'kakuy *to be unable*; ri'akuy *awake*; pu'sakuy *to carry somebody with oneself*; a'sikuy *to laugh*. But with the

declention the accent moves to the ending syllable in the first persons of both singular and plural: asikū^{u} *I laugh*, asikuyā^{a} *we laugh*; rurā^{a} *I do*; rurayā^{a} *we do*. Thus fully accented words are normally stressed on some particular syllable; it may even happen that two forms differ merely in the placing of an accent: asikuykā^{a}ya' *we are laughing*; asikuyā^{a} *we laugh*. The important point to observe is that when a particular syllable does receive the stress it takes musical inflections. The acoustic effect is somewhat different in the negative and interrogative words which have no connotation, and if we wish to make a question we add the interrogative suffix ku, and obtain a form such as ka'nkū? *is there*?; ka'punkū? *has he*?; a'sinkū? *does he laugh*?; and in the negative we add the suffix cū: ka'ncū *there is not*; ka'puncū *he hasn't*; a'sincū *he does not laugh*.

We should note another point in regard to the diphthongs. It is important to distinguish between organic diphthongs, in which each element of the diphthong has a distinct radical or etymological value, and the secondary diphthongs, arising from an i, or u or m with prefixed inorganic a. The secondary diphthongs, ai, au, al, am, an, being etymologically single vowels or semivowels are always monotonic in character; they can have the raised, not the rising accent. nau'pa *before*; rau'ran *it burns*; wa'max *strange*.

Phonetically such secondary diphthongs are hardly different from shortened organic diphthongs; etymologically and, in consequence, in morphological treatment, the line of difference is sharply drawn.

It has been said that any particular syllable, if accented, necessarily receives a definite pitch inflection. It is furthermore pointed out that distinct words and forms may differ merely in the character of the accent, and that definite grammatical forms are associated with definite accentual forms; it becomes evident therefore that pitch-accent has a not unimportant bearing on morphology. Examples of words differing only in the pitch-accent are: ta'ri, *sit down*; tarī^{i} *I find*; tā^{a}ku *I am seating*; ta'ku *mixed*.

Indeed, neither vowel-quantity nor accent can be considered negligible factors in the Callejón de Huaylas dialect phonology, as shown by following: wa'rmi *woman*; wa'armī^{i} *my wife*; pu'norqā^{a} *I slept*; pu'nō^{o}rqa *he slept*; la'te^{e} *to stick*, lā^{a}te^{e} *to creep*.

It is impossible to give any simple rule for the determination of the proper accent of all words. What has been ascertained in regard to the accent of certain forms or types of words in large part seems to be of a grammatical character and not purely phonetic, hence will most naturally receive treatment when the forms themselves are discussed. Here it will suffice to give illustrations of the morphological value of accent in a few cases.

Perhaps the most comprehensive generalization that can be made in regard to the employment of the accents is that keynote in this dialect requires the falling pitch-accent on the first syllable in almost all the bisyllabic words and in the last one when a change occurs in the grammatical meaning of the verb or noun. Some of the forms affected are:

a) The first person singular and plural of all verbs, as in wi'yā^{a} I hear; wi'yayā we hear.

b) The first person both singular and plural aorist of all the verbs that take the keynote as the characteristic element of these persons and tense, such as in, asiko'rqā^{a} *I laughed*; asikuya'rqā^{a} *we laughed*.

c) The imperative, wi'yē^{e} *hear*; wi'yayē^{e} *hear* (plural).

d) The first person singular genitive of nouns whose ending is any vowel: qo'ā^{a} *my husband*; wa'mrā^{a} *my child*; wa'i' *my house*. (The words ending in voiceless consonants, R or N, add the particle ni for the genitive, such as Ku'ruR *ball of yarn*; ku'ruRnī^{i} *my ball of yarn*; ra'yaN *drum*; ra'yannī^{i} *my drum*. Also the words ending

in y, and x add ni^{i}: wi'sl^{y}ax *a plant*; wi'sl^{y}axnī^{i} *my plant*; tu'kuy *everything*; tuk'uynī^{i} *all my things*.)

e) The first persons both singular and plural of the verbs derived from a noun, wi'ra *lard*; wi'rayē^{e} *to become fat*; wir'ayā^{a} *I am growing fat*.

f) All the verbal suffixes take the falling pitch: sa'x, ye', cu', ku', qa', ya'N, ko'x, ki', ra', na'x, ki'm, ka', pa', ki', ti'.

Many more rules, such as these, could be given, but these will suffice at present to show what is meant by the "fixity" of certain types of accent in the morphological classes.

4. Consonants. The Callejón de Huaylas dialect consonant system: bilabial p, m; dental t, n, s, c, l, r, ʀ; blade-alveolar š, č; palatal k, ŋ, x; velar q; pre-dental n^{y}, l^{y}; semivowel w, y.

5. Morphology. Although it is not intended in this paper to give a complete account of the dialect, it is necessary to give some details about morphology in order to illustrate some vowel processes. There are three processes employed in the dialect of Callejón de Huaylas for the purposes of grammatical modification and word formation: suffixation and infixation, reduplication, and vocalic change (ablaut) and consonant change. Pitch accent is of grammatical importance, but is most probably a product of purely phonetic causes. Of the processes mentioned, suffixation is by far the most important, while the forms of infixation will have to be allowed or denied according to the definition given of it.

6. Suffixation. Suffixation is the normal method employed in building up actual forms of nouns and verbs from stems. The suffixes in themselves have for the most part very little individuality, some of them being hardly evident at all except to the minute linguistic analysis. The notions they convey are partly derivative of one kind or other. In the verb they express such ideas as those of position, reciprocal action, causation, frequentative action, reflexive action, spontaneous activity, action directed to some one, action done in behalf of some one. From the verb-stem such adjectival and nominal derivations as participles, infinitives, or abstract nouns of action and nouns of agent are formed by suffixation. In the noun itself various suffixed elements appear whose concrete meaning is practically nil. Other suffixes are formal in the narrower sense of the word. They express pronominal elements for subject and object in the verb, for the possessor in the noun, modal elements in the verb. Thus a word like wa'nucina'kuyā^{a} *we kill one another* contains, besides the infinite stem wa'nuci wa'nuy (*to die* plus ci for naming the action *to kill*), na expresses the general idea of relation between subject and object, ku umlauted from kui (element denoting reciprocal action) and ya, personal plural subject intransitive in all tenses of the verbs. As an example of suffixation in the noun may be given wa'i^{i} *my house*. This form contains, besides the stem wa'i *house*, the suffixed element $^{-i}$, employed to form all the possessive case of nouns in the first singular person.

7. Infixation. Infixation, or what appears to be such, is found in the formation of second and third plural persons of indicative and of all the aorist stems, futures and frequentatives. Thus the second and third plural persons of indicative show the element denoting plurality, ya or yan intrusive or infixed between the last vowel of the stem and the n of the singular third person. Examples of such an infixation are: wi'l^{y}a' *I advise*, wi'l^{y}aya^{a} *we advise*; wi'l^{y}anki *you advise*, wi'l^{y}ayanki *you advise*; wi'l^{y}an *he or she advises*, wi'l^{y}ayan *they advise*.

The aorist tense shows a far more complicated infixation, but generally it appears with the infixed r between the stem and the

suffix qa or qe (expressing the agent who performs the action). This form is illustrated by: wi'lʸarqa' *I advised*, wi'lʸaya'rqāᵃ *we advised*, wi'lʸarqeʸki *you advised*, wi'lʸ-ayarqe'ki *you advised*, wi'lʸa'rqa *he or she advised*, wi'lʸaya'rqa *they advised*. In the plural the infixation is between the stem form of the indicative and the suffix qa or qe.

Infixation in frequentative forms appears in three forms: 1) when the stem is merely a transitive verb, 2) when the stem signifies a compound form of frequentative or durative; 3) when the stem means a reciprocal action. As examples may serve:

(1) wi'lʸeᵉka *I am advising*, wi'lʸeka'ya *we are advising*, wi'lʸekanki *you are advising*, wi'lʸekayaʸnki *you are advising*, wi'lʸeᵉkan *he or she is advising*, wi'lʸeka'yan *they are advising*.

(2) Infixation of re between the stem and the significative of agent element ka: wi'lʸareᵉka' *I am advising*, wilʸareᵉkanki *you are advising*, wi'lʸareᵉkan *he or she is advising*, wi'lʸareᵉkaya *we are advising*, wi'lʸarekayanki *you are advising*, wi'lʸarekayan *they are advising*.

(3) The reciprocal form has two forms also, one simple and one durative. In the first the infixed elements are na and ku between the stem and the plural suffix ya: wi'lʸanakuyaᵃ *we advise each other*, wi'lʸanakuya'nki *you advise each other*, wi'lʸanakuyan' *they advise each other*.

In the second form the intrusive elements infixed are na, ku, re, ka, between the stem and the plural element ya: wi'lʸanakureᵉkaya *we are advising each other*, wi'lʸanakureᵉkayanki *you are advising each other*, w'lʸanakureᵉkayan *they are advising each other*.

On examination it is found that the infixed elements are, with the only exception of ka which correspond to verb stem ke'(*to be*), independent phonetical material, with the exclusive function of modifying the grammatical meaning of the verbs. Thus na and re have not any other part in the speech, and ku is used only in other verbal process for signifying interrogative forms, such as: ka'nku *is there*?; wi'lʸanku *does he advise*? We have seen that oftenly an infixed element is augmented itself by other infixations. Thus we have:

Verb stem	Aorist stem	Frequentative
wi'lʸeᵉ (*to advise*)	wi'lʸarqaᵃ	wi'lʸakuᵘ
ku'yeᵉ (*to love*)	ku'yarqaᵃ	ku'yakuᵘ
ru'reᵉ (*to do*)	ru'rarqaᵃ	ru'rakuᵘ
wa'qoy (*to embrace*)	wa'qorqaᵃ	wa'qokuᵘ

8. Vowel ablaut. Only i is affected; it becomes e. In sharp contradistinction this ablaut affects only the radical portion of the word, and thus serves as a further criterion to identify the stem. Thus we have ni'marqa *he told me*, but ne'rqaᵃ *I told him*.

9. Reduplication. wa'cukukuⁱ *from* wa'-cuku *belt*, and cu'kukuⁱ from cu'ku, *hat*, with the reflexive meaning to put on oneself.

In the Callejón de Huaylas dialect as possibly in all the dialects of Kechua family, the verb plays the most important part of the sentence. We have already seen before the typical verb-form in this dialect and the tendency to phonetic amalgamation between different groups of suffixes.

SPANISH AND ENGLISH LOANWORDS IN TAOS

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1. In a paper entitled The Days of the Week in the Language of Taos Pueblo, New Mexico, Lg. 15.51–5 (1939), I expressed the hope of making "detailed studies of all the Spanish and English loanwords I find in the language" (p. 52). The present article is a fulfillment of that hope for the materials in my collections. I have not gathered any new material since 1937, and as some of my texts are not completely analyzed, it may be that there are additional loanwords that I have not yet identified. But barring this possibility, the lists here are complete.

1.1. In everyday speech the Taos use many more loans, especially of English origin, but these I was never able to record because there was—once it was known that I knew something of the language—little free conversation in my presence, and what there was I could not write down but only try to remember. My informants reacted to many loanwords with a kind of purism that made it difficult to get them to repeat the words. The items treated here were either recorded in text, with no comment from me until later, or were caught on the wing, as it were.

1.2. The article mentioned above contains a general discussion of bilingualism among the Taos, and of the use of Spanish and English loans (p. 51–2), and has many details of Taos pronunciation; it also mentions previous publications on the language. My paper The Historical Phonology of the Tiwa Languages, Studies in Linguistics 1, no. 5 (1942) [10 p.], gives a reference to additional bibliography, and has some statements about Taos phonemes and morphology; the article there cited, The Relationship of Uto-Aztecan and Tanoan, by the late B. L. Whorf and myself, AA 39.609–24 (1937), contains some description of the phonology and morphology of Taos (612–13). My article The Kinship and Status Terms of the Tiwa Languages, AA 45.557–71 (1943), briefly describes Taos sounds and treats three of the words presented here (p. 562). For further description reference will have to be made to my Outline of Taos Grammar, which is to appear in the volume Linguistic Structures of Native America, expected to be published by the Viking Fund Publications in 1945.

1.3. In The Days of the Week . . . I used tilde (˜) for nasal vowels and j for the palatal semivowel, and omitted initial glottal stop. In The Relationship of Uto-Aztecan and Tanoan the letter y was substituted for j. In E. C. Parsons's Taos Tales (Memoirs of the American Folklore Society, 34 [1940]), the footnotes which I supplied containing Taos material have the hook under vowels (˛) for nasality (I have not used the tilde since), and use y, but in the two texts in the Appendix (p. 173–81) I retained j, as I thought I would use it in my Outline. For the same reason j was used in the Comparative Phonology and the kinship paper. This last and the Appendix both show initial glottal stop. Recently, in making a final revision of the text of the Outline, I decided to bring my transcription into line with most Americanist practice, and use y for the semivowel. Inferior w (instead of superior) I introduced in the Comparative Phonology and continue to use it here for reasons I need not go into.

The material now presented accordingly uses the following symbols (not all of them actually occurring): a, ą, b, c, c', e, ę, ə, f, g, h, i, į, k, k_w, k', k'_w, l, ł, m, n, o, ǫ, p, p', p‘, r, s, t, t', t‘, u, ų, w, x, x_w, y, ?, and the accent-marks 'a, ˌa, á, à. Alphabetical order is as shown, but ? is ignored except that a vowel

without preceding ʔ comes before the same vowel with it.

To save the reader the need of immediate reference to any of the works mentioned, these phonetic details are given (cf. Outline, chapter 2 passim): a [a<], ą [ą>], e [ɛ>], ę [ę], ə [ë] and [ə^], i [į] and [ɪ], i [i] and [ɪ], o [ɑ] or [ɒ], o [φ], u [u] and [ʊ], u [u] and [ʊ]; b, d, g voiced initially and medially, voiceless lenis in syllable final; c [ts] before e, o and sometimes a, ə, [č] elsewhere, c' [č'] before i, į, u, u, [ts'] elsewhere; h rather strong; k slightly aspirate; c', k', k'$_w$, p', t' lenis and weakly glottalized; l neutral to dark; ł weakly fricative; p', t' strongly aspirated (p' sometimes almost [ɸ]); r as Spanish short r; x and x$_w$ almost frictionless; w, y semivocalic; ʔ usually mere hiatus or absence of voicing. The loud and medial stresses with middle (normal) tone, 'a and ˌa, are much as the loud and reduced-loud of English ('trolley- ˌcar, ˌgood 'night); á is high tone (higher than normal), à is low tone (lower, and drawled), both high- and low-toned syllables having medial stress when there is a loud normal stress in the same word; weak syllables, unmarked, are short and slurred, with normal tone, except that final weak syllables two syllables after a loud stress are usually somewhat raised in pitch.

2. The English loanwords presented in this article are few and seem to be quite recent. Some words of English origin are really to be treated as Spanish loans in Taos, as it is obvious from their form that they have come in from New Mexican Spanish (cf. the paper by myself and G. Valdez, English Loans in Colorado Spanish, American Speech 12.34–44 [1937], which discusses some of the general factors in borrowing, and gives details of Colorado Spanish pronunciation, which is essentially the same as that of the Spanish of northern New Mexico); they are listed with the English loans, however.

The Spanish loans can be divided into three groups, on the basis of the closeness of their form to the Spanish originals. It seems safe to assume that the greatest departure from Spanish is found in the oldest loans, that the more recent ones show a closer approach to the original, and that the most recent show very little change from Spanish. It is sometimes difficult to decide whether a word belongs in one or another group, for reasons that will be discussed in section 3. A fourth group is composed of words whose forms are distorted in various irregular ways.

The four groups of Spanish loans, and the English ones, are presented in alphabetical order in the following lists. The Taos words are all nouns, except as noted, and are given in the singular absolute forms, followed by the meaning; then comes the plural absolute and a symbol indicating the gender (I, animate; II and III, inanimate, with IIIn, a subdivision of III called local gender) and the declension (details of the declensions will be found in the Outline, §3.21, the symbols being given here to make possible future reference); the stem-form, used as object in noun-verb compounds, alone as vocative, and in general in composition, follows in parentheses; finally is given the Spanish or English original; where New Mexican Spanish (NMSp) differs considerably from the standard orthographic form, it is given in phonemic transcription between slant-lines (//); this phonemic analysis is based on my observations of the dialect, but has not been published (cf. §3).

2.1. The Spanish loans that seem to be oldest are the following. The words for the days of the week, which were treated in detail in the paper The Days of the Week . . . , are in this list; they are not ordinary nouns, have no plural, and the form given is their stem-form. For the details of the phonological equivalences, see §3.1.

h'algoną *rug, carpet,* hˌalgoʔ'one, II.3dh (h'algo-); < jerga *straw pallet, coarse cotton fringe,* in New Mexico any floor covering or mat.

kum,ayli?'ina *godmother of one's child*, kum'aylinạ, I.1hd (kum'ayli-); < comadre. (Cf. The Kinship and Status Terms . . ., p. 562, 565, 570.)

kump,ayli?'ina *godfather of one's child*, kump'aylinạ, I.1hd (kump'ayli-); < compadre. (Cf. Kinship . . . , ibid.)

l'ayna *king*, l'aynạ, I.1aa (l'ay-); < rey.

l'ayna *law*, l'ayne, III.5aa (l'ay-); < ley; l'aybọ *by law, legally*.

l'unąsi *Monday*, < lunes.

m,etu?'una *teacher*. See m,estu?'una in §2.2.

m'ialkulisi *Wednesday*, < miércoles.

m'ialnąsi *Friday*, < viernes.

m'ilxinạ *the Virgin*, < virgen. This word occurs only in the expression kik'ana m'ilxinạ *our* [3+ plural possessor] *mother the Virgin*, i.e., *our Lady*. The word is not a noun, but seems to belong to a small group of forms which are used chiefly with the verb wámą *to be*, and are translated as predicate adjectives (k,ipidąwámą *he is naked*); I call these forms nominals (Outline, §3.23).

m'oltąsi *Tuesday*, < martes.

molt,iyu?'una *hammer*, molt,iyu?'une, III. 5hh (molt'iyu-); < martillo (NMSp /martíio/).

m,uldu?'una *donkey, burro*, m'ulduną, I.1hd (m'uldu-); < burro.

m,ulso?'ona *pocket, purse*, m,ulso?'one, III. 5hh (m'ulso-); < bolsa.

m,uoya?'ana *ox, steer*, m'uoyaną, I.1hd (m'uoya-); < buey (final stem-vowel from the occasional NMSp pronunciation /buéie/).

síen, síenạ, *hundred*, < cien, apocopated form of ciento (NMSp/sién/). All Taos words (and most stems) ending in one of the consonants b, d, g, m, n, l, r, w, y appear also with ą following the stem-final consonants; the conditions under which this ą may be omitted are not known to me, but seem to depend somehow on the syntactic construction and the speed of utterance; that is, the ą is a so-called free variant; in this loanword the adaptation to Taos practice is complete; in the examples to be cited, I have presented the forms as I first got them—two with ą, the rest without; either form is possible, however, in each instance. This word is one of the numerals; it is never used for *one hundred*, which is tętę (*ten-ten* [the resemblance to the English is pure coincidence]; both syllables have high tone, with loud stress on the first and medial on the second, cf. Outline, §2.223), but always for the higher hundreds: w'isíen *200*, p'oyuosíen *300*, w'iansíen *400*, p''ąnyuosíen *500*, m'ąlisíen *600*, c'usíenạ *700*, x_w'ilisíen *800*, x_w'įęsíenạ *900*.

s'obolu *Saturday*, < sábado.

sup,ono?'ona (*bed*)*spring*, sup,ono?'one, III. 5hh(sup'ono-); < sopanda *brace, cross-beam*, NMSp *spring*.

telęd'unenemą *fork*, telęd'unene, II.4dd (telęd'un-); < tenedor.

t,ulu?'una *bull, ox*, t'uluną, 1.1hd (t'ulu-); < toro.

tum'įku *Sunday, week*, < domingo.

w,alto?'ona *garden*, w,alto?'one, IIIn.5hh (w'alto-); < huerta.

x_w'abasi *Thursday*, < jueves.

y,awo?'ona *mare*, y'awoną, I.1hd (y'awo-); < yegua (NMSp/iéua/).

2.2. The most common type of Spanish loan is represented by the following list; here the changes are much less than in the previous group. See §3.2 for the sound equivalences.

?ad,ubi?'ine *adobe*, III.6h (collective, no number distinction; ?ad'ubi-); < adobe. I am not sure of this form for the common noun, but I have in a text the proper name ?adub'iyu *Adobe* (as a character in the tale); the suffix -yu and the stress change also occur in xomun'inyu, which see under xom'unenemą below.

bok,ato?'ona *leather*, III. 5h- (no plural?; may be an error of recording for -ne, which would make the word collective, declension 6h; bok'ato-); < NMSp /bakáta/, cf. Spanish vacarí *of leather*, derived from vaca *cow*.

b'osuną, *glass (tumbler)*, b,osu?'une II.3dh (b'osu-); < vaso.

b,oyi?'ina *valley*, III.5h- (plural not recorded, probably -ne, 5hh; b'oyi-); < valle (NMSp /báie/).

but'eyoną *bottle*, but,eyo?'one, II.3dh (but'eyo-); < botella (NMSp /botéia/).

b'utoną *boot*, b,uto?'one, II.3dh (b'uto-); < bota. This word occurred in a text (pib,utow'ayá *I'll take off the boot*), and was interpreted by the informant as being the English boot; its form clearly indicates that it must be Spanish, however.

b,ut'unena *button*, b,ut'unene, III.5dd (b,ut'un-); < botón. Cf. also mųst'unena in §2.4.

g,oyu?'una *rooster*, g'oyuną, I.1hd (g'oyu-); < gallo (NMSp /gáio/).

k,asu?'una *cheese*, k,asu?'une, III.5hh (k'asu-); < queso.

kay'unena *canyon*, kay'unene, III.5dd (kay'un-); < cañón. There is a native hɔ̀olune (III.6d) *arroyo, canyon*; I cannot cite text evidence as to how the native word and the loan differ in use; the former is a collective, however, so whenever the singular-plural distinction is in point the loan could be used.

kom,olto?'ona *bed(stead)*, kom,olto?'one, III.5hh (kom'olto-); < NMSp /kamalta/, probably cama alta *high bed*.

kop''ane *coffee*, III.6a; < café. This stem occurs also in the descriptive stative verb kop''ahi *to be coffee-colored, brown* (recorded kɔ̀p'ahi, but I think this must be an error), and in the compound noun kop',a?ąs'ine *sugar* (commercial), literally *coffee-sweetness* (III.6a).

k,uci?'ina *pig*, k'uciną, I.1hd (k'uci-); < cochi American Spanish 'pig'. I have recorded the compound k,ucit'uone *pork*, literally *pig-meat* (III.6a).

k,uli?'ina *cabbage*, k,uli?'ine, III.5hh (k'uli-); < col (final vowel of stem from the occasional NMSp variant /kóle/).

l,imun'ena *lemon*, l,imun'ene, III.5aa (limun-, stress not recorded, possibly lim'un-, see the discussion of stress in §3.2). See also rar,ąxu?'una in §2.4.

mąk,ino?'ona *machine*, mąk,ino?'one, III.5hh (mąk'ino-); < máquina.

m,estu?'una *teacher*, m'estuną, I.1hd (m'estu-); < maestro. The form m'etu- (see §2.1) was also recorded from another informant; the informant who gave m'estu- thought that the form m'etu- was used by older people; this idea he may have got from my comments on other loanwords.

m'ędianą *stocking*, m,ędia?'ane, II.3dh (m'ędia-); < media. I have also recorded the plural as m,ęd'iane (3db). The stem occurs in the compound m,ędiax,ųci-?'ina *garter* (plural -ne, III.5hh), literally *stocking-leg* [x'ų-]-*tie* [c'i-]-*er*.

m'ęsoną *table*, m,ęso?one, II.3dh (m'ęso-); < mesa.

m,ęso?'ona *mass, church*, m,ęso?'one, III.5hh (m'ęso-); < mesa *altar, table* (or possibly < misa *mass*?). See the next entry.

m,ęsotu?'una *church*, m,ęsotu?'une, III.5ii (m'ęsotu-); plural also recorded as m'ęsotune (5if); < m'ęso- (the preceding entry) plus an element which may be the same as the one found in ł,ot'una *wagon* (cf. ł,o?'one wood, stem ł'o-); -tu- may mean *construction, object*. I have the form m'ęsotu?oyą *in church* (-oyą postposition *in, at*).

m'ilą *thousand*, < mil. A numeral; for the final ą cf. sien in §2.1. The Taos also say tętętę or tętętęlę for *thousand*, but m'il(ą) is more common, and is always used for the higher thousands.

m,iyo?'ona *mile*, m,iyo?'one, III.5hh (m'iyo-); < milla (NMSp /míia/).

mons,onu?'una *apple(-tree)*, mons,onu?'une, III.5hh (mons'onu-); < manzano *apple-tree* (NMSp /mansáno/).

m,ulo?'ona *mule*, m'uloną, I.1hd (m'ulo-); < mula.

?ob,enu?'une *oats* (wild and domestic), III.6h (?ob'enu-); < *avena*. The stem-final -u points to a NMSp /abéno/; I do not know whether such a form exists. See also ?,udmil'ena in §2.5.

ʔox,enti?'ina *agent, superintendent of Indian agency*, ʔox'entiną, I.1hd (ʔox'enti-); < agente. The Spanish usage is based on the English agent in this meaning. I got the form in text: ʔox,entin'oti *from the superintendent* (-n'oti postposition *from*).

pl,oso?'ona *city, town*, pl,oso?'one, III.5hh (pl'oso-); < plaza *town square* (NMSp /plása/ *town*). I have the form pl,oso h'əo-] *city*.

p,ostal'ena *pastry, pie*, III (plural not recorded but probably -ne, 5cc); < pastel.

pr,imu?'una *cousin*, pr'imuną, I. 1hd (pr'imu-); < primo. (Cf. The kinship and status terms . . . , p. 562, 565, 570).

p'uelona *fryingpan*, p,uelo?'one, II.3dh (p'uelo-); < NMSp /puéla/ (undoubtedly from French poêle at a time when it was still pronounced [pwɛ·lə]).

p,uru?'una *cigar*, p,uru?'une, III.5hh (p'uru-); < puro (originally cigarro puro *cigar made of a single whole tobacco leaf*.

p''iasto- *fiesta, celebration, feast;* recorded only in stem-form in text: nąp',iastoł'owámą *they had a big feast*, literally *feast-big* [t'o-]*-there was;* the ną- prefix indicates that p''iasto- is a noun of gender IIIn, the absolute singular being probably p''iastona and the plural p''iastone (5dd).

p',istul'ena *pin*, p',istul'ene, III.5aa (p'istul-, stress not recorded, but possibly p'ist'ul-); < fistol NMSp (*scarf*)*pin*. Recorded from another informant as pist'urena; this shows the stress from the original, but the r is a distortion, and the p may be a mishearing for p'; this latter form belongs in the group listed in §2.4.

t,ięndo?'ona *store, shop*, t,ięndo?'one, III.5hh (t'ięndo-); < tienda. Also recorded with non-nasalized ie.

tom,oli?'ina *tamale*, tom,oli?'ine, III.5hh (tom'oli-); < tamale.

tum,ąti?'ina *tomato*, tum,ąti?'ine, III.5hh (tum'ąti-); < tomate.

tùoyoną *towel*, tùoyo?'one, II.3dh (tùoyo-); < toalla (NMSp /tuáia/).

ʔ,ubo?'ona *grape, raisin*, ʔ,ubo?'one, III.5hh (ʔ'ubo-); < uva.

ʔ'uliną *rubber (object)*, ʔ'uline *rubber* (the substance), *rubber objects*; II.3dd (ʔ'uli-); < American Spanish hule. I have the word also in the compound ʔ,ulit''awaną *tire* (II.3dh), literally *rubber-wheel.*

ʔ,uro?'ona *hour*, ʔ,uro?'one, IIIn.5hh (ʔ'uro-); < hora. I have the phrase w,iʔ'uro *two hours* ("adverbial"), *two o'clock.*

ʔ,uru?'una *gold*, III; plural not recorded, but probably ʔ,uru?'une, 5hh, in the meaning *gold* (the substance), *gold objects*, the singular being for *gold object* (ʔ'uru-); < oro.

xom'unenemą *ham*, xom'unene, II.4dd (xom'un-); < jamón. In the same tale in which the character ʔadub'iyu *Adobe* occurs there is also a character xomun'inyu *Ham* (recorded -yų, but the nasalization is almost certainly an error); whether -'inyu is an error of hearing for -'iyu, and the two words have the same suffix, I cannot say.

2.3. The list of obviously recent Spanish loans, showing little phonetic change from the original, is as follows:

ben,ęnu?'une *poison*, III.6h (ben'ęnu-); < veneno.

bin,ągre?'ene *vinegar*, III.6h (bin'ągre-); < vinagre.

c,ili?'ine *chili pepper*, III.6h (c'ili-); < *chile*, often in NMSp /cíli/. The form of this word is such that it could just as well be one of the older loans. I have recorded it also in the compounds c,ilił,ə?'əne *chili (soup, stew)* (III.6h), c,ilit',əo?'one *chili pepper* (powder) (III.6h), literally *chili-flour*, c,ilix,oy?ù?'una *string of chili* (III, plural not recorded), literally *chili-skin* [x'oy-]*-little one.*

fr'utona *fruit*, IIIn (plural not recorded; fr'uto-); gender ascertained from text, nąfr'utowon *there arrived some fruit.*

k,ayi?'ina *street*, k,ayi?'ine, III.5hh (k'ayi-); < calle (NMSp /káie/).

lec,ugo?'one *lettuce*, III.6h (lec'ugo-); < lechuga.

m'or- *ocean, sea*; recorded only in stem-form in text: m'orp'ò?oyą *to* [-?oyą] *the ocean-water* [p'ò-]; < mar.

p,ero?'ona *pear*, p,ero?'one, III.5hh (p'ero-); < pera.

r,ancu?'una *ranch*, r,ancu?'une, III.5hh (r'ancu-); < rancho.

s'edoną *silk*, II (plural, if any, not recorded; s'edo-); < seda.

t'ene *tea*, III.6a (t'e-); < té.

2.4. We now come to a set of words some of which, though obviously Spanish loans, show distortions of such a nature as to make it impossible to classify them chronologically with any certainty. Others are possibly not loans at all, but involve coincidental resemblances to Spanish words.

cikul,oti?'ina *chocolate*, III.5h- (plural not recorded; cikul'oti-); < chocolate. The form is regular for the group in §2.2 except for the first vowel; cu- would be expected. I can suggest no plausible analogy for the change.

k'owena *horse*, k,ow'enemą, I.2db (k'ow-). It can be assumed that this word might be from caballo; ko- < ca- is expected, and w < b (which is spirantal, being intervocalic) is not too great a distortion in what is presumably an early loan, but the rest of the word doesn't fit. The base ko- occurs in k,on'ena *buffalo* (k,on'enemą, I.2bb, k'on-) and k,osi?'ina *buffalo cow, cow* (k'osiną, I.1hd, k'osi-), and the word for *horse* may be another extension of the base, -w(e)- being a not uncommon stem formative; in that case the distant resemblance to caballo is no more than a coincidence. I have the stem k'ow- in k,owmącel'ena (*horse's*) *hoof* (-c'elene, III. 5ce), literally *horse-fingernail*, and k,ow?ù?'una *colt* (k'ow?uną, I.1gd), literally *horse-little one*.

mųst'unena *button*, mųst'unene, III.5dd (mųst'un-). Except for the s, this would be a good form from botón according to the pattern of the oldest loans in §2.1; the s, however, is something that can occur in syllable-final only in recent borrowings; this form, then, is apparently a distortion of an old loan on the basis of some analogy, possibly with p'‘istul'ena (§2.3), for which the informant who supplied the present form used pist'urena. A third informant gave m,ǫtun'ena for *button*; the m and the following nasalization are according to the oldest pattern, and the stress change could fit the two older patterns, but ǫ for the close Spanish o can only be due to distortion through some analogy.

n,odu?'una *soldier*, n'oduną, I.1hd (n'odu-). I assume this is ultimately from soldado, but there is no evidence to suggest any explanation of the resultant form. I recorded it first in text: l'ay ?ąmn,oduwá?in *the King* [as a proper name, in stem-form] . . . *his soldiers*.

pist'urena *pin*, pist'urene, III.5dd (pist'ur-); already discussed under p'‘istul'ena in §2.2.

p'‘,o?'ina *peach*, p'‘,o?'ine, III.5bb (p'‘,o?'i-). This may be from pavía, which ought, however, to give, according to the pattern in §2.2, *pob'ia- or *pob'i-; the absence of an internal consonant is really surprising if the word is a loan, but if it is in spite of that, the first syllable may then be a contamination from p''ona *hair* (p''one, III.5aa; p''o-).

rar,ąxu?'una *orange* (also, *lemon*), rar,ąxu-?'une, III.5hh (rar'ąxu-); < naranjo *orange tree*. With an initial n, this would be a good example of the newest loans (NMSp /anx/ is very close phonetically to Taos ąx); but the introduction of the new phoneme r into a new position is wholly unexpected.

?'uyna *charcoal*, ?'uyne, III.5aa (?'uy-). If this is from hulla (*soft-)coal*, the form should be *?'uyo-; the loss of the stem-final vowel cannot be explained. I have the form also in ?,uyp'‘a?'ana *burning*

coal (-ne, III. 5hh), literally *charcoal-burn* [p'a-]-*er*.

2.5. The loan-words of English origin are the following:

bel'isena *valise, suitcase*, bel'isene, III.5dd (bel'ise-); through NMSp /belíse/ < valise. As a Spanish loan, following the patterns in §2.3.

gosul'inene *gasoline*, III.6d (gosul'in-); probably through NMSp /gasolína/ because of the first two vowels (pattern of §2.2), but the form of the stem seems to be directly from gasoline.

k$_{ı}$eke?'ena *cake, cracker*, k$_{ı}$eke?'ene, III.5hh (k'eke-); through NMSp /kéke/, by the pattern of §2.3, < cake.

k'oywona *Kiowa Indian*, k'oywoną, I.1dd (k'oywo-); probably from English Kiowa, though it could be direct from Kiowa kaegua.

k$_{ı}$ompu?'una *camp*, k$_{ı}$ompu?'une, III.5hh (k'ompu-); < campo (pattern of §2.2), but the meaning *camp* in NMSp is a loan from English camp.

k$_{ı}$uku?'une *cocoa*, III.6h (k'uku-); < cocoa.

k$_{ı}$uti?'ina *coat*, k$_{ı}$uti?'ine, III.5hh (k'uti-); through NMSp /kúte/ < coat.

k$_{w}$'iltoną *quilt*, k$_{w}$$_{ı}$ilto?'one, II.3dh (k$_{w}$'ilto-); through NMSp /kuílta/ < quilt.

n'abahuna *Navaho Indian*, n'abahuną, I.1ff (n'abahu-); this must be directly from English Navaho, in view of the vowel qualities and the stress; once it was even heard with [v] or [β] instead of [b]. I think the Taos must have an old name of their own for the Navahos, judging from the reaction of my informants when I asked them about it, but they wouldn't tell me, except to give me an obscene term which they said was not a name but an epithet.

p$_{ı}$owdo?'one (*baking*) *powder*, III.6h (p'owdo-); < powder.

pul'isena *policeman*, pul'isenemą, I.2dd (pul'ise-); < police(man).

say'enuna *Cheyenne Indian*, say'enuną, I.1dd (say'enu-); < Cheyenne (the stem-final u is puzzling).

s$_{ı}$udo?'one *soda* (baking, etc.), III.6h (s'udo-); < soda.

t$_{ı}$ikiti?'ina *ticket*, t$_{ı}$ikiti?'ine, III.5ii (t'ikiti-); through NMSp /tíkete/ < ticket, or directly from English.

tr$_{ı}$ampi?'ina *tramp, thief, "bum"*, tr'ampiną, I.1hd (tr'ampi-); through NMSp /trámpe/ (pattern of §2.3) < tramp, or directly from English.

tr$_{ı}$oki?'ina (*motor-*)*truck*, tr$_{ı}$oki?'ine, III.5hh (tr'oki-); through NMSp /tróke/ (pattern of §2.3) < truck, or could be directly from English.

?$_{ı}$udmil'ena *oatmeal* (prepared cereal, cooked), III.5 (plural, if any, not recorded; ?'udmil-); < oatmeal.

2.6. At this point there may be added three other words in my lists that seem to be loans.

p$_{ı}$enku?'una *orphan*, p'enkuną, I.1hd (p'enku-); because e is not found in stems in Taos except in recent loans, this word seems suspicious; but from its meaning it ought not to be a loan word, and I can find no European origin for it unless it be Spanish pingo *worthless person* (so in Pequeño Larousse).

pis'oloną *blanket*, pis$_{ı}$olo?'one, II.3dh (pis'olo-); according to B. L. Whorf, this may be from Hopi pös'ala. There must be other loans from Indian languages, of course; m$_{ı}$ụsi?'ina *cat*, m'ụsiną, I.1hd, was referred by Whorf to Hopi mo·sa, but words of this general appearance meaning *cat* are widespread in America.

p'ons'ayna *American, white man* (other than a Spanish-speaking person or Mexican, these being known as k$_{w}$'ęna, k$_{w}$'ęnemą, I.2aa, k$_{w}$'ẹ̇-), p'ons'ayną, I.1aa (p'ons'ay-). I have seen the suggestion, probably in a paper of Harrington's, that this word is from the Spanish francés *Frenchman*, or directly from French français; this suggestion is not improbable phonetically, but I know of no way to prove it. I have the stem also in p'ons$_{ı}$aytų?'une *English language* (III.6h).

3. The process of following closely the presentation of material this far has given the reader a good idea of the kinds of adaptations of sounds and forms that have taken place. In the following sections I shall state systematically these changes, and then discuss details and irregularities.

The Spanish phonemic system taken as a basis here is that of New Mexican Spanish. The consonant, vowel, and stress phonemes are: /p, t, k, b, d, g, c [č], f, s, x, m, n, ñ, l, r, r·; i, e, a, o, u; '/. A few phonetic details are: /p, t, k/ voiceless, fortis, unaspirated; /b, d, g/ voiced stops initially and after nasals, voiced spirants elsewhere (/d/ voiceless lenis spirant when final), /x/ almost [h], /r·/ two or more taps (occurs only intervocalically, the short /r/ being used initially); /i, u/ non-syllabic before and after other vowels; /e/ usually open when loud-stressed, and short and raised when weak, /o/ usually quite close, /a/ rather back than central or front; /'/ accompanied by high pitch. Some speakers have /y/ and /w/ as separate phonemes, but the phonetics of loan-words is not affected by this.

There are not enough English loans to make it possible to discuss what happens to all English phonemes, so English will be discussed by starting from sounds rather than phonemes.

3.1. In the oldest loans from Spanish (§2.1), the original phonemes are represented as follows:

/p, t, k/ > /p, t, k/: kum,ayli?'ina, kump,ayli?'ina, m,etu?'una, m'ialkulisi, m'oltəsi, molt,iyu?'una, sup,ono?'ona, telęd'unenemą, t,ulu?'una, w,alto?'ona.

/b/ > /m/ initially: m'ialnąsi, m'ilxiną, m,uldu?'una, m,ulso?'ona, m,uoya?'ana; /b/ > /b/ intervocalically: s'obolu, x_w'abasi; no evidence for /b/ in consonant clusters.

/d/ > /t/ initially: tum'įku; /d/ > /d/ intervocalically in telęd'unenemą, where there is a preceding /l/, but > /l/ in s'obolu; /dr/ > /yl/ intervocalically: kum,ayli?'ina, kump,ayli?'ina; /nd/ > /n/ intervocalically: sup,ono?'ona.

/g/ > /g/ in h'algoną; /ng/ > /ˌk/ in tum'įku; yegua has no /g/ in NMSp—see under /u/; no evidence for /g/ initially or in clusters.

/c/, /f/: no evidence.

/s/ > /s/: m,ulso?'ona, síen(ą), s'obolu, sup,ono?'ona; final /s/ > /si/: m'ialkulisi, m'ialnąsi, m'oltəsi, x_w'abasi.

/x/ > /h/ initially: h'algoną; /x/ > /x/ internally: m'ilxiną; /xu/ > /x_w/ before a vowel: x_w'abasi.

/m/ > /m/: kum,ayli?'ina, kump,ayli?'ina, m,etu?'una, m'ialkulisi, m'oltəsi, molt,iyu?'una, tum'įku.

/n/ > /n/: l'unąsi, m'ialnąsi, m'ilxiną; /nd/ > /n/: sup,ono?'ona; /-n--d--r-/ > /-l--d--n-/: telęd'unenemą; /ng/ > /ˌk/: tum'įku; final /n/ > /n/ ~ /ną/: m'ilxiną, síen(ą).

/ñ/: no evidence.

/l/ > /l/: l'ayna *law*, l'unąsi, m'ialkulisi, m,ulso?'ona.

/r/ > /l/: h'algoną, l'ayna *king*, m'ialkulisi, m'ialnąsi, m'ilxiną, m'oltəsi, molt,iyu?'una, t,ulu?'una, w,alto?'ona; /-n--d--r-/: see under /n/; /dr/ > /yl/: kum,ayli?'ina, kump,ayli?'ina; /tr/ > /t/: m,etu?'una.

/r·/ > /ld/: m,uldu?'una.

/i/ > /i/ when syllabic: m'ilxiną, molt,iyu?'una, tum'įku; /ie/ > /ia/ (see /e/): m'ialkulisi, m'ialnąsi, but > /ie/ in síen; non-syllabic /i/ (chiefly < Castilian /y/ and /lʸ/) > /y/: l'ayna, molt,iyu?'una, m,uoya?'ana, y,awo?'ona; /ing/ > /'įk/: tum'įku.

/é/ > /'a/: h'algoną, l'ayna, w,alto?'ona, x_w'abasi, y,awo?'ona; but /é/ > /e/ in síen, m,etu?'una (the Spanish vowel is close in these cases); weak-stressed /e/ > /a/ in x_w'abasi and in m,uoya?'ana (< buey(e)); weak-stressed /e/ > /ą/ after /n/ in l'unąsi, m'ialnąsi, and /ene/ > /enę/ becoming /elę/ by metathesis in telęd'unenemą; weak-stressed /e/ > /ə/ in m'oltəsi

(by dissimilation from following /i/ʔ), and /i/ elsewhere: kum,ayliʔ'ina, kump,ayliʔ'ina, m'ialkulisi, m'ilxiną. The stem-final /i/ after /s/ from Spanish final /s/ may be interpreted as a case of /e/ > /i/, as weak-stressed /e/ is the vowel that "fills out" syllables in Spanish, especially in NMSp. From /ue/ we get /uo/ in m,uoyaʔ'ana.

/a/ > /o/: h'algoną, m'oltəsi, molt,iyuʔ'una, m,ulsoʔ'ona, sup,onoʔ'ona, w,altoʔ'ona, y,awoʔ'ona; but /a/ > /a/ before /yl/ < /dr/: kum,ayliʔ'ina, kump,ayliʔ'ina.

/o/ > /u/: kum,ayliʔ'ina, kump,ayliʔ'ina, m,etuʔ'una, m'ialkulisi, molt,iyuʔ'una, m,uldu?'una, m,ulsoʔ'ona, s'obolu, sup,onoʔ'ona, telęd'unenemą, t,ulu?'una, tum'iku.

/u/ > /u/: l'unąsi, m,uldu?'una, m,uoyaʔ'ana; non-syllabic /u/ > /w/: w,altoʔ'ona, y,awoʔ'ona, and /xu/ > /x_w/: x_w'abasi.

Loud stress gives loud stress everywhere, with normal tone, except that the addition of loud-stressed suffixes reduces the stem-stress to a medial. But in sien the tone is high; this may be due to the fact that the Spanish diphthong /ie/ is rising, while Taos /ie/ is level, and the Spanish monosyllable has a high pitch when stressed.

From the above lists the following facts are evident. The voiceless stops remain unchanged, becoming the corresponding sounds in Taos. The voiced stops are eliminated initially, as Taos has no initial voiced stops in native words (Proto-Tiwa *b- > m-, *d- > l-, see 'Comparative phonology . . .'), /b/ becoming /m/, but /d/ giving /t/ (no evidence for /g/); internally /b/ and /g/ remain, the Taos sounds being the nearest available equivalents for the Spanish ones; but /d/ becomes /y/ before /r/ (which becomes /l/), and /l/ intervocalically, except where an /l/ precedes, in which case /d/ remains; the spirantal character of Spanish /d/ was evidently troublesome to Taos speakers in this early period. The phoneme /s/ remains unchanged; as /s/ does not occur in syllable-final position in native Taos words, Spanish /s/ in that position is replaced by /si/; the /i/ not only is the naturally expected result as if from Spanish weak-stressed /e/ (see above), but also fits the slightly [š]-like character of Taos /s/. Spanish /x/, for which Taos could use either /x/ or /h/, is replaced by /h/, which accords with the fact that NMSp /x/ is [h]-like and has rather strong friction, while Taos /x/ is weak; but /xu/ before a vowel becomes /x_w/, the phonetic equivalence being practically perfect. The nasals /m/ and /n/ remain; the optional addition of /ą/ after final /n/ has been commented on under sien; Taos had no groups /ng/ or /nk/, and the Spanish /n/ in this case was replaced by mere nasalization of the preceding vowel (already present phonetically in Spanish). Taos /l/ replaces both /l/ and /r/, as /r/ in Taos is a borrowed sound, occurring only in recent loans (§§2.2, .3); for the long (or double) /r·/ we get /ld/, which can be explained as dissimilation.

The vowels show an interesting series of replacements. Generally speaking, while /i/ and /u/ remain, /e/ > /a/, /a/ > /o/, /o/ > /u/. NMSp /o/ is quite close, as has been said, and is well-rounded, so that the only Taos phoneme similar to it phonetically is /u/. NMSp /a/ is not usually fronted, so that it is quite near to Taos /o/; the presence of Taos /a/ in kum'ayli-, kump'ayli-, is probably due to the fact that after the replacement of /dr/ by /yl/, Taos /o/ was not appropriate, as /oy/ in Taos has a somewhat raised back vowel, almost [ʌ]. NMSp /é/ is almost uniformly quite open, and Taos /a/ is not far from it in sound; this replacement of /e/ by /a/ is also in accord with the fact that Taos /e/ does not seem to occur in any stems, but only in suffixes, being thus a phoneme whose occurrence was, before the advent of bilingualism, morphophonemically limited. The replacement of weak-stressed /e/, which is close and short, by Taos weak-stressed /i/ (= [ɪ]) is phonetically the only possibility. The one case of /e/ > /ə/ is an irregularity,

perhaps due to dissimilation, as suggested above. The first pre-stressed /e/ in tenedor is phonetically like Taos /e/ and is accordingly replaced by it. Nasalization of vowels following a nasal consonant or preceding one in the same syllable is regular in NMSp, and postnasal (and prenasal) vowels go over into Taos as nasal vowel phonemes: /ing/ > /'įk/, /ne/ > /ną/ and /nę/. The non-nasalized /e/ in m,etu?'una may be due to the fact that the Spanish has a checked syllable, decreasing the nasalization. I cannot account for the absence of nasalization in sien.

Of other phenomena, the metathesis in teled'un- is most interesting: we can assume that tenedor became *tened'ul-, and the l and n then changed places.

Most of the Spanish nouns become Taos noun-stems with their forms pretty much unchanged. Those that end in vowels have the absolute singular form represented by the formula S?Rna, where S is the stem, and R the reduplication of the final stem-vowel: kum,ayli?'ina, kump,ayli?'ina, m,etu-?'una, molt,iyu?'una, m,uldu?'una, m,ulso-?'ona, m,uoya?'ana, sup,ono?'ona, t,ulu-?'una, w,alto?'ona, y,awo?'ona. This is a very common formation in native Taos material for nouns of genders I and III. All the words here that belong to gender I show an absolute plural with the formula Snq, a pattern constituting declension 1hd, a very common type in the language. The nouns of gender III, however, have plurals of the same type as the singular, S?Rne, a pattern (declension 5hh) which is not very frequent in my native Taos material for stems with stress '–, but frequent enough for stems of the forms '-- (5gg) or '--- (5ii). The noun h'algoną has gone over into gender II, and has the absolute suffix added directly to the stem vowel, though the plural is S?Rne; this type (3dh) is common.

Of the nouns not ending in vowels, ley and rey (the Spanish y here represents phonemic /i/, but in a consonantal allophone), becoming l'ayna, appear in a stem-form that is quite possible in Taos, and attach the absolute suffix directly; tenedor, becoming teled'un-, is adapted to the Taos stems that end in -n- but have -e- before the absolute suffixes (as p''ianenemą *mountain*, p''ianene, p''ian-).

The nouns for animate beings become members of gender I, others are distributed into II and III, probably on the basis of analogies of meaning with native words (I don't cite possible analogies because that would be much too speculative.) All the new nouns have the syntax of native Taos nouns.

The words for the days of the week are taken over without the addition of noun-suffixes, though their syntax with verbs and postpositions is the same as that of nouns. Their use in compounds with preceding numerals, and their stem-form use in what might be called adverbial function, makes it necessary to set them up as a special small class of enumeratives resembling both nouns and numerals.

The word m'ilxiną, as already indicated, is not a noun, but one of the special class of nominals.

Only Spanish nouns are found in this group of loan-words, except for sien < cien the numeral.

3.2. Many of the words in §2.2 show the same results as those of the list in §2.1, and the separation is made in these cases, I must admit, on the basis of the meaning of the words rather than from their form. The phonemic substitutions and equivalences are:

/p, t, k/ remain: bok,ato?'ona, but'eyoną, b'utoną, b,ut'unena, k,asu?'una, kay'unena, kom,olto?'ona, kop''ane, k,uci?'ina, k,uli?'ina, mąk,ino?'ona, m,estu?'una, ?ox,enti?'ina, p,ostal'ena, p'uelona, p,uru-?'una, t,įendo?'ona, tom,oli?'ina, tum,ąti?'ina, tùoyoną. The initial clusters /pl/ and /pr/ are preserved, introducing a new phenomenon into the language: pl,oso?'ona, pr,imu?'una. But the cluster /str/ is simplified to /st/: m,estu?'una.

/b, d, g/ are preserved in all positions: ʔad,ubiʔ'ine, bok,atoʔ'one, b'osuną, b,oyiʔ'ina, but'eyoną, b'utoną, b,ut'unena, g,oyuʔ'una, m'ędianą, ʔob,enuʔ'une, t,iędoʔ'ona, ʔ,uboʔ'ona.

/c/ is preserved: k,uciʔ'ina.

/f/ > /pʻ/ (which is, with many Taos speakers, [pɸ] or almost [ɸ]): kopʻ'ane, pʻ'iasto-, pʻ,istul'ena.

/s, x/ remain: b'osuną, k,asuʔ'una, m,estuʔ'una, m'ęsoną, m,ęsoʔ'ona, mons,onuʔ'una, pl,osoʔ'ona (in the last two examples NMSp /s/ is for Castilian /θ/), p,ostal'ena, pʻ'iasto-, pʻ,istul'ena; ʔox,entiʔ'ina, xom'unenemą.

/m, n/ remain: b,ut'unena, kay'unena, kom,olto?'ona, l,imun'ena, mąk,inoʔ'ona, m,estuʔ'una, m'ędianą, m'ęsoną, m'ęsoʔ'ona, m'ilą, m,iyoʔ'ona, mons,onuʔ'una, m,uloʔ'ona, ʔob,enuʔ'una, ʔox,entiʔ'ina, pr,imuʔ'una, t,iędoʔ'ona, tom,oliʔ'ina, tum,ątiʔ'ina, xom'unenemą.

/ñ/ has become /y/ in kay'unena, possibly by dissimilation from the following /n/.

/l, r/ remain: kom,olto?'ona, l,imun'ena, m'ilą, m,uloʔ'ona, pl,osoʔ'ona, p,ostal'ena, pr,imuʔ'una, p'ueloną, p,uruʔ'una, pʻ,istul'ena, tom,oliʔ'ina, ʔ'uliną, ʔ,uroʔ'ona, ʔ,uruʔ'una. /r/ is lost in m,estuʔ'una, a three-consonant cluster being impossible in Taos. The retention of /r/ has brought a new phoneme into Taos; this new entity, being found in positions similar to those in which /l/ already occurred, becomes one of the group of phonemes I call the sonorants (/b, d, g, m, n, y, w, l, r/; cf. Outline, §2.223).

There is no evidence in this group of words for /rʻ/.

The vowels change with almost complete regularity: /i/ > /i/, /e/ > /a/, /a/ > /o/, /o/ > /u/, /u/ > /u/, with /ę, ą/ appearing after nasals for Spanish /e, a/. There would be no point in repeating the whole list of words here for illustration. Only the exceptions need be taken up.

Non-syllabic /i/ for Castilian /ɪ̯/ becomes /y/; this is regular and expected.

Weak-stressed /e/ is usually /i/, as is expected.

The sequence /ie/ becomes /ia/ quite regularly, but /ię/ before syllable-checking /n/ in t,iędoʔ'ona.

For Spanish /a/ we get /a/ in bok,atoʔ'ona (possibly by dissimilation between two other /a/'s), in kay'unena (fronting before /y/ʔ), and in m'ędianą (/ia/ treated as a unit, /io/ not existing in Taos). The /a/ of ʔad,ubiʔ'ine points to this word as belonging in the group of §2.3, but as the word occurs, in the form ʔadub'iyu, in the same text with xomun'inyu, it must be of the same age, and its /a/ may be either a recent reworking from an older /o/, or Spanish initial /a/ may have been heard as more fronted than in other positions.

The diphthong /ue/, with a rather close [e], is found only in the word p'ueloną; it is foreign in Taos, but seems to fit into the general diphthong pattern easily enough.

As far as stress is concerned, most of the loans show retention of the Spanish loud stress, with normal tone, on the same syllable of the stem, this loud stress becoming medial in composition with or on the addition of loud-stressed elements. There are a few special developments, however.

The form b,ut'unena has a medial stress on the first syllable; the only explanation I can suggest is that -t'u- is being treated as the native formative element of that shape, so that b,u- is considered as if it were a base of its own.

The form l,imun'ena shows a common Taos stress pattern, with loud stress on the formative element -e- and medial stress on the second syllable before it. The stem stress should be lim'un-, and this might have given the absolute form *lim'unena; with the absolute as recorded, however, the stem is probably, at least with many speakers, l'imun-. Here the tendency to adaptation to Taos patterns is strong; this word could, for this reason, be an early loan; I have put it in the group of §2.2 because of its meaning, which I think identifies it as a

relatively late loan, at least as far as really popular usage goes. The word p,ostal'ena is another example of the same type of formation as l,imun'ena, -l'e- being also a common formative.

The stress of mąk,ino?'ona departs from the expected. Possibly mą- was understood as the Taos formative mą- (*pertaining to*) *hand*; this then set up -k'ino- as a pseudo-base.

In tùoyoną we have loud stress with low tone. I account for the tone by the cadence of the diphthong: in NMSp /tuáia/ the /u/ is low in pitch and non-syllabic, the /á/ is higher, and the final /a/, though weak-stressed, is highest. A Taos word of two syllables, with a diphthong having low tone in the first, has very nearly this pitch pattern.

Morphologically, we have the same patterns in these words as are described in §3.1. Nouns in genders I and III are usually of the form S?Rna, those in gender II have the form Sną or Seną.

For the stem kop''a- *coffee*, I have recorded, as noted, the verb kop''ahi *to be brown*. Such formations undoubtedly occur for other loanwords, for once the Spanish word becomes incorporated into the Taos language it becomes subject to all the possibilities of derivation that any other stem has.

The form m'ilą is now the regular word for *thousand* in Taos, and occurs as m'il or m'ilą with the same free variation as all other forms in sonorant plus ą. Note that its vowel, though from a Spanish post-nasal vowel, is not nasalized; this is probably due to dissimilative influence of the l.

3.3. The most recent loans (§2.3) are identified as such by the retention of the Spanish phonetic form with a minimum of changes.

Nasalization of vowels after nasals is found in ben,ęnu?'une, bin,ągre?'ene. Retention of loud-stressed /e/ and /a/ as Taos /e/ and /a/ (or /ę/ and /ą/) is found in these same two words, and also in k,ayi?'ina, p,ero?'ona, r,ancu?'una, s'edoną, t'ene. The weak-stressed vowels are treated as in the older loans, /a/ becoming /o/, and /e/ becoming /i/, but bin,ągre?'ena has /e/ > /e/ (possibly -re- is treated as if it were a formative like the native -le-, -ne-, -we-, etc.). The vowel /o/ becomes /u/, of course. The cluster /fr/ is retained (fr'utoną), this being the only instance of /f/ that I have in Taos; I suppose that this [f] could be treated as an allophone of Taos p', but since the whole cluster is foreign, it is probably better to consider it as a new phoneme. The stem m'or- has /o/ < /a/, and is perhaps an older loan (§2.2).

3.4. The words in §2.4 were commented on already when they were listed above. The phonological phenomena they exhibit are irregular, but clearly within the range of possibilities established by the regular developments.

3.5. The English loans in §2.5 have been commented on above. Further remarks may be added here.

The words that came into Taos through NMSp are: bel'isena, k,eke?'ena, k,ompu?'una, k,uti?'ina, k,'iltoną, tr,ampi?'ina, tr,oki?'ina. They show varying treatments: tr'ampi- and tr'oki- have stem-final i (§§2.2, 3.2), while k'eke- keeps e (§§2.3, 3.3); k'ompu- has o < /a/, while tr'ampi- keeps a for /a/. These differences are within the patterns set by the Spanish loanwords, and do not show any direct influence of the English original (except possibly for tr'ampi-).

In the word gosul'inene the vowels o and u clearly point to the NMSp intermediary (the o < /a/ in such a recent loan is due to its being weak-stressed), but the stem-form, as stated, is affected by the English; otherwise a stem *gosul'ino- would be expected.

In k'oywona, n'abahuna, say'enuna we have three names that show clearly the effect of the English forms, and are probably direct loans. k'oy- from English /káy/ is expected, as American English usually has a rather back vowel in this sequence; on the

other hand, say- from /šày/ seems appropriate, the English /a/ being more fronted between /š/ and /y/ than otherwise. The loss of a syllable in k'oywona is perhaps an indication of Taos familiarity with the Kiowa form kaegua (which sounds very much like Taos k'oywo-, according to my own observation in the field). The syllable -wo- for English /wə/ or Kiowa -gua is phonetically appropriate. Taos 'a for English /ǽ/ in n'abahuna is expected, as is u for /ow/, but the second a < English /ə/ is perhaps due to influence of the Spanish pronunciation; /b/ for /v/ is expected. There being no /š/ in Taos, we expect s for English /š/; the stem-final u in say'enuna is perhaps due to adaptation to a supposed NMSp intermediary form */šayéno/.

The remaining English loans show the following equivalences:

/p, t/ > Taos /p, t/ (p'owdo-, pul'ise-, t'ikiti-), in spite of the aspiration usually found in the English sounds; the Taos aspirates /p', t'/ are much more strongly aspirated than the English sounds, and are much less like them than are the Taos plain stops; as for /k/ > /k/, the aspiration is almost identical in the two. Internal English /t, k/ in k'uku- and t'ikiti- are unaspirated and go over into the identical-sounding Taos phonemes. In ?'udmil- we have d from syllable-final /t/; the Taos sound is a voiceless non-released lenis, and therefore very much like the English sound; besides, Taos /t/ does not occur in syllable-final position. In t'ikiti- the English final /t/ has been taken over with a following vowel, showing a possible NMSp intermediary.

/d/ > /d/ in p'owdo-, s'udo-; /l/ > /l/ in pul'ise-, ?'udmil-; /s/ > /s/ in pul'ise-, s'udo-. The sound equivalences are good.

/ow/ > /u/: k'uku-, pul'ise- (pointing to a pronunciation /powlíys/ rather than /pəlíys/, unless we have here some influence from Spanish policía), s'udo-, ?'udmil-.

/aw/ > /ow/: p'owdo-; this reflects the English pronunciation with a back vowel, rather than the Southern /æw/.

/iy/ and /i/ both > /i/: pul'ise-, t'ikiti-, ?'udmil-; this is the only possibility.

/ə/ and /ər/ both > /o/: p'owdo-, s'udo-; this is expected, as the retroflexion of English /ər/ is not like any other Taos sound.

English loud stress remains as Taos loud-normal in the stem (alternating to medial in appropriate circumstances). The English reduced-loud (or medial) of /ówt-mîyl/ (/-mìyl/) is not represented because of the following loud-stressed stem-formative in the Taos word.

The formation S?Rne in k,uku?'une, p,owdo?'one, s,udo?'one is expected on the basis of the other loanwords and of Taos forms generally. In pul'isena and ?,udmil'ena we have the stem-formative -e-, necessary after s, which cannot end a stem, and one of the common possibilities after l. In ?,udmil'ena the stem-formative is loud-stressed, as expected with a stem of the form ?'udmil-. The stem and absolute forms of t,ikiti?'ina are, as suggested, probably influenced by a NMSp intermediary.

3.6. The isolated words in §2.6 are too few and their origin is too uncertain to make possible any further statements.

4. In the lists above there are, including variants and compounds or constructions cited, about 120 words (listed alphabetically for reference after this section). This constitutes about five percent of my files, which contain about 2500 entries. A more thorough study of the Taos language, with enough texts collected to furnish as many as 10,000 vocabulary items, would probably add to the number of loanwords, and might maintain the same percentage or even increase it. As time goes on, and the Taos become more acculturated, there will certainly be an increase in the number of English (and possibly also Spanish) loanwords.

It is important to note that only nouns and a few noun-like forms have been borrowed. Taos verb inflection does not apparently lend itself to the assimilation of

new material (except by secondary derivation from already adopted nouns).

A more important influence on the language than the obviously borrowed stems will be the loan-translations and the new compounds and other formations made out of wholly native material. There are plenty of these in Taos now, but an adequate study of them cannot be attempted until I have much more extensive acquaintance with actual everyday usage in the language.

4.1. An alphabetical list of all the Taos words cited in this article (loans and others—including compounds and constructions, but plurals are not listed), with reference to the sections where they are treated, follows:

?ad,ɨ bi?'ina 2.2, 3.2.
?adub'iyu 2.2, 3.2.
bel'isena 2.5, 3.5.
ben,ęnu?'une 2.3, 3.3.
bin,ągre?'ene 2.3, 3.3.
bok,ato?'ona 2.2, 3.2.
b'osuną 2.2, 3.2.
b,oyi?'ina 2.2, 3.2.
but'eyoną 2.2, 3.2.
b'utoną 2.2, 3.2.
b,ut'unena 2.2, 3.2
cikul,oti?'ina 2.4.
c,ili?'ine 2.3.
c,ilił,ə?'əne 2.3.
c,ilit'əo?'one 2.3.
c,ilix,oy?ù?'una 2.3.
c'usíeną 2.1.
fr'utona 2.3, 3.3.
gosul'inene 2.5, 3.5.
g,oyu?'una 2.2, 3.2.
h'algoną 2.1, 3.1.
hə̀olune 2.2.
k,asu?'una 2.2, 3.2.
k,ayi?'ina 2.3, 3.3.
kay'unena 2.2, 3.2.
k,eke?'ena 2.5, 3.5.
k,ipidąwámą 2.1.
kom,olto?'ona 2.2, 3.2.
k,ompu?'una 2.5, 3.5.
k,on'ena 2.4.
kop''ahi 2.2, 3.2.
kop',a?ąs'ine 2.2.
kop''ane 2.2, 3.2.
k,osi?'ina 2.4.
k'owena 2.4.
k,owmą̀cel'ena 2.4.
k,ow?ù?'una 2.4.
k'oywona 2.5, 3.5.
k,uci?'ina 2.2, 3.2.
k,ucit'uone 2.2.
k,uku?'une 2.5, 3.5.
k,uli?'ina 2.2, 3.2.
kum,ayli?'ina 2.1, 3.1.
kump,ayli?'ina 2.1, 3.1.
k,uti?'ina 2.5, 3.5.
k$_w$'ęna 2.6.
k$_w$'iltoną 2.5, 3.5.
l'ayna *king* 2.1, 3.1.
l'ayna *law* 2.1, 3.1.
l'aybo 2.1.
lec,ugo?'one 2.3.
l,imun'ena 2.2, 3.2.
l'unąsi 2.1, 3.1.
ł,ot'una 2.2.
mąk,ino?'ona 2.2, 3.2.
m'ąlisíen 2.1.
m,estu?'una 2.2, 3.2.
m,etu?'una 2.1, 3.1.
m'ędianą 2.2, 3.2.
m,ędiax,ųci?'ina 2.2.
m'ęsoną 2.2, 3.2.
m,ęso?'ona 2.2, 3.2.
m'ęsotu?oyą 2.2.
m,ęsotu?'una 2.2.
m'ialkulisi 2.1, 3.1.
m'ialnąsi 2.1, 3.1.
m'il 3.2.
m'ilą 2.2, 3.2.
m'ilxiną 2.1, 3.1.
m,įyo?'ona 2.2, 3.2.
m'oltəsi 2.1, 3.1.
molt,iyu?'una 2.1, 3.1.
mons,onu?'una 2.2, 3.2.
m'or- 2.3, 3.3.
m'orp'ò?oyą 2.3.
m,ǫtun'ena 2.4.
m,uldu?'una 2.1, 3.1.
m,ulo?'ona 2.2, 3.2.
m,ulso?'ona 2.1, 3.1.
m,uoya?'ana 2.1, 3.1.

m,ųsi?'ina 2.6.
mųstun'ena 2.4.
n'abahuna 2.5, 3.5.
nąfr'utowon 2.3.
nąp',iastol'owámą 2.2.
n,odu?'una 2.4.
?ob,enu?'une 2.2, 3.2.
?ox,enti?'ina 2.2, 3.2.
?ox,entin'oti 2.2.
p,enku?'una 2.6.
p,ero?'ona 2.3, 3.3.
pib,utow'əyá 2.2.
pis'oloną 2.6.
pist'urena 2.2, 2.4.
pl,osoh'əoto 2.2.
pl,oso?'ona 2.2, 3.2.
p,ostal'ena 2.2, 3.2.
p,owdo?'one 2.5, 3.5.
p'oyuosíen 2.1.
pr,imu?'una 2.2, 3.2.
p'ueloną 2.2, 3.2.
pul'isena 2.5, 3.5.
p,uru?'una 2.2, 3.2.
p''ąnyuosíen 2.1.
p''ianenemą 3.1.
p''iasto- 2.2, 3.2.
p',istul'ena 2.2, 3.2.
p',o?'ina 2.4.
p''ona 2.4.
p'ons'ayna 2.6.
p'ons,aytų?'une 2.6.
r,ancu?'una 2.3, 3.3.
rar,ąxu?'una 2.4.
say'enuna 2.5, 3.5.
s'edoną 2.3, 3.3.
síen 2.1, 3.1.
síeną 2.1, 3.1.
s'obolu 2.1, 3.1.
s,udo?'one 2.5, 3.5.
sup,ono?'ona 2.1, 3.1.
telęd'unenemą 2.1, 3.1.
t'ene 2.3, 3.3.
tętę 2.1.
tętętę 2.2.
tętętęlę 2.2.
t,ikiti?'ina 2.5, 3.5.
t,ięndo?'ona 2.2, 3.2.
tom,oli?'ina 2.2, 3.2.
tr,ampi?'ina 2.5, 3.5.
tr,oki?'ina 2.5, 3.5.
t,ulu?'una 2.1, 3.1.
tum,ąti?'ina 2.2, 3.2.
tum'įku 2.1, 3.1.
tùoyoną 2.2, 3.2.
?,ubo?'ona 2.2, 3.2.
?,udmil'ena 2.5, 3.5.
?'uliną 2.2, 3.2.
?,ulit''awaną 2.2.
?,uro?'ona 2.2, 3.2.
?,uru?'una 2.2, 3.2.
?'uyna 2.4.
?,uyp'a?'ana 2.4.
w,alto?'ona 2.1, 3.1.
w'iansíen 2.1.
w'isíen 2.1.
w,i?'uro 2.2.
xom'unenemą 2.2, 3.2.
xomun'inyu 2.2.
x$_w$'abasi 2.1, 3.1.
x$_w$'ilisíen 2.1.
x$_w$'įęsíeną 2.1.
y,awo?'ona 2.1, 3.1.

THE HISTORICAL POSITION OF CHICOMUCELTEC IN MAYAN

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In 1894, Carl Sapper, the geographer, discovered an aberrant Mayan dialect or language at Chicomucelo in Chiapas, Mexico.[1] He recorded 169 words and recognized that these bore greater resemblance to the Huaxtec of northern Vera Cruz than were shown by the vocabularies of any other Mayan language. The Huaxtec are separated by 500 km. or more from the other Mayan languages, which occupy a continuous block of territory in Chiapas, Tabasco, Guatemala, and the peninsula of Yucatan. Huaxtec is recognized as Mayan; but its special similarity to Chicomucelo has ethno-historic implications, which fact Sapper recognized.

In 1926, Franz Termer, another geographer, also visited Chicomucelo and recorded a larger vocabulary.[2] He could find only three old persons still conversant with Chicomuceltec, which had meanwhile disappeared before Spanish, Motocintleca, and the "lengua de Guatemala." It is thus clear that no more material is obtainable on this local language. Termer secured terms for 85 concepts already secured by Sapper, with close concordance generally; plus 203 new ones. Sapper obtained 84 not obtained by Termer; making a total of 372 vocables on the language.

In an attempted classification of all the Mayan languages which I published in 1939,[3] I overlooked Termer's ten-year-old contribution, but united Chicomuceltec with Huaxtec in a subdivision of "Lowland" Maya, which contrasts with a second division, "Highland" Maya. The significance of "Lowland" and "Highland" is specifically linguistic, though the speech line largely coincides with geography. Chicomucelo lies at about 550 m., or within the lowland tierra caliente, whose upper limit is usually set at about 600 m.

Examination of Termer's vocabulary confirms Sapper's and my conclusions. I cite two groups of terms. In the first, Chicomuceltec and Huaxtec share a stem apparently not found in other Mayan; at least not with the same meaning. In the second group, there are other Mayan cognates, but Chicomuceltec and Huaxtec are closer together. Orthography is as in the sources.

	Chicom.	Huaxtec	Other Mayan
		I	
head	ok	ok	pol, jol, vib
tongue	lekau	lecab	a'k
navel	co'on	con	muxux, etc.
fish	tool	tol	cai, car, chai
star	ot	ot	ek, k'anal, ch'umil
smoke	pa	pauj	bu'tz, chail, sip
mountain	chen	tzeem	vuitz, yuk, puuc, tzul
sand	kisiu	quisib	ji, suus, pok-
maize ear	vai, vaai	guai	jal, nal
		II	
eye	val	vual	ich, jut, sat; Highland, vuach, vuitz
nose	tzam	sam	ni, ju; Qu'iche group, tz'am
ear	uchun	xutzum	xiquin
tooth	kamau	camab-lec	e; Maya, Tzental, chaam: *molar*
foot	akan	akan	ok; Qu'che group, akan
salt	etem	atem	atz'am, taab
stone	tuhu	tujub	tun, tunich, abaj, cup
road	vel	bel	be, bey, bij

[1] Das Nördliche Mittel-Amerika, 1897.

[2] Die Mayasprache von Chicomucelo, Proc. 23rd Intern. Congr. Americanists (New York, 1928), 926–936, 1930.

[3] Cultural and Natural Areas of Native North America, UCPAAE 38, 112–4, 1939. (Written in 1931.)

	Chicom	Huaxtec	Other Mayan
maize			
grain.....	isis	isis	ixim
four.....	che	tze	can-, chan-, caj-, quij-, quiaj-
five.....	vo	bo	jo, joob; Cakchiquel, vuoo; Ixil, ovual

The following intra-group minor shifts are visible in this material:

Chic.	Huax	
ch (= tš)	tz (= ts)	*mountain, ear, four*
v-	b-	*road, five*
-u	-b	*tongue, tooth*
-n	-m	*mountain, ear* (but ct. *navel, nose, foot, salt* n:n or m:m)
v'v	v	*navel, fish, maize ear* (but ct. *mountain*)

All these correspondences occur also in forms not reproduced here.

The historical interpretation is not clear. Chicomucelo may have been a Huaxtec fragment left behind when Huaxtec speakers traveled northwest from the main Mayan territory. Or both may have drifted from the main Mayan body, Huaxtec continuing to move on, Chicomuceltec returning after a time. Such movements of local groups are abundantly documented in Mexican history. Other possibilities can be conjectured, but they seem more complicated or gratuitous hypotheses.

There are some special resemblances of Chicomuceltec, and Huaxtec also, to various Highland languages. A few have been indicated in the list. If they were confined to Chicomuceltec, they would be ascribable to secondary loans or influences; but at least some occur in distant Huaxtec also, and must therefore be relatively old.

Termer speaks of "bemerkenswerte Beziehungen" of Chicomuceltec also to Jacaltec, Chuj (Solomeño), and Mam. The first two are Lowland type languages spoken in the near-by Highland; Mam is a Highland type language a little beyond, in southwestern Guatemala. Termer's fragmentary material on this point is not very convincing. There have no doubt been secondary influence-relations with neighboring languages. But these can be determined only on a basis of comparison of all Mayan; and beyond inspectional comparisons, none have been made. Andrade was in position to go deeper; but since his premature death there seems to be no one occupying himself with comparative Mayan. Until such studies have been made, my provisional inspectional classification has at least the merit of being empirical and independent of other theories; and the geographically puzzling special resemblance of Chicomuceltec to Huaxtec, discovered by Sapper and confirmed by Termer, stands.

A CEREMONIAL VOCABULARY AMONG THE PUEBLOS

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1. Critique of archaic survivals
2. Ceremonial vocabulary
3. Notes on vocabulary
4. Keresan parallels
5. Functional explanation
6. Native explanation
7. Anthropological interpretation
8. Summary and conclusions

1. For more than a half century ethnographers among the Pueblo Indians of Arizona and New Mexico have been in the habit of calling certain classes of words archaic. Words that are unintelligible to the natives who use them, certain words which the ethnographer cannot translate, poetic expressions, one of two words having the same meaning and which is not in common use,—these, and perhaps other classes of words and phrases, are commonly called archaic. It is the thesis of this article that in most cases this interpretation is quite unwarranted, and that, in instances where it might be justifiable, merely to brand the words archaic would be to obscure or conceal a phenomenon of vital importance in Pueblo life: a special vocabulary of ceremonial terms.

The belief that the Pueblo Indians have preserved certain words from the remote past and continue to use them today despite the fact that they no longer know the meanings of these words, is fairly common among ethnographers. Thus Bandelier speaks of "the positively established fact of the existence of archaic terms which the Pueblo Indian uses without knowing any longer their signification."[1] In rendering Hopi songs into English Voth frequently encounters words which he cannot translate. He therefore calls them "archaic; meaning unknown."[2] Cushing contrasts archaic names for the cardinal points at Zuni with modern terms, and refers to a myth "filled with archaic expressions nowhere to be found in modern Zuni."[3] Stirling, speaking of a version of the origin myth at Acoma, says that it was "couched in archaic language so that in many places the younger interpreters were unable to translate and the elderly informant would have to explain in modern Acoma phraseology."[4]

If it were an established fact that the Pueblo Indians of today use ancient words in their own respective languages whose meanings have been forgotten, we would have an interesting problem before us: Why have they done this? Why would they continue to use the empty shells of words after the living kernels of meaning had died within them? Is such a thing possible? No Pueblo ethnologist, so far as we know, has raised such questions as this and attempted to answer them. But before undertaking an explanation of these alleged cases of semantic amnesia we must inquire if they are indeed archaisms as claimed or whether they are phenomena of a different kind.

With one exception so far as we know, none of the ethnographers who claim that certain words are archaic has attempted to substantiate his claim with evidence. Bunzel has undertaken to show that kacima tapela is indeed an archaic expression in

[1] Ad. F. Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, Part I, Papers of the Archaeological Institute of America, American Series III, p. 262; Cambridge, 1890.

[2] H. R. Voth, The Oraibi Powamu Ceremony, Anthropological Series, Field Museum, Vol. III, No. 2, pp. 126–54; Chicago, 1901.

[3] F. H. Cushing, Zuni Fetiches, BAE-R 2.17, 12; Washington, 1884.

[4] M. W. Stirling, Origin Myth of Acoma and Other Records, BAE-B 135.vii; Washington, 1942.

Zuni.[5] But no other student that we know of has offered any fact or argument in support of his claim for archaisms. They merely declare that such and such word is archaic. But can one tell that a word is archaic merely by looking at it?

Many so-called archaic words are not archaic at all but words borrowed from a foreign language. The Pueblo Indians frequently borrow each other's songs and occasionally, at least, each other's prayers. It thus happens that an informant may be quite unable to translate a song or prayer that he knows by heart. Or, it might be only a word or a phrase that defies translation. Cushing and Voth were well aware of this pueblo custom of borrowing from a foreign tongue, yet when each encounters words which he cannot translate he calls them archaic.

One of the songs of the Oraibi powamu ceremony, according to Voth (p. 136), IS COMPOSED ENTIRELY OF ARCHAIC WORDS. It is much more likely that it is sung in a language foreign to the Hopi. As a matter of fact one of the words, hanati, is in all probability the Keresan word for *clouds* (henati). Other words look Keresan, also; tama may be kama *house*; muuta may be modi *youth* or *boy*. In another song Voth says that the word "iola is an archaic word. It very likely means corn ear. One priest said that he had heard it meant mother," (p. 133). Iola is probably the Keresan iariko; *l* and *r* are frequently interchanged, and iariko is the Keresan name of the *corn ear* fetich, or *mother*. Other words in Hopi songs, e.g. nayawuna, wawuna, shaatcina, etc., which Voth calls archaic, are probably Keresan words also.[6]

At Zuni according to Cushing:

"In the prayer-songs of the Saniakiakwe, the names of all these prey gods are, with two exceptions, given in the language of the Rio Grande Indians. This is probably one of the many devices for securing greater secrecy, and rendering the ceremonials of the Hunter Society mysterious to other than members. The exceptions are, the Coyote . . . known by the archaic name of Thlakiatchu, instead of by its ordinary name, of Suski, and the Prey Mole, or god of the Lower regions, which is named Maitupu, also archaic, instead of Kialutsi."[7]

But maitupu also is a word "in the language of the Rio Grande Indians:" we have identified it repeatedly as maidyupi *shrew* (Sorex) among the Keres.[8]

Thus we see that many of the words and phrases commonly called archaic are not archaic at all but terms taken over from a foreign tongue.

In his Keresan Texts Boas[9] states that ocara (*sun*) is the old form of ocatc. We can see no reason, and Boas does not offer one, for regarding one of these words as the old form of the other. The Keres very often change the pronunciation of a word to adapt it to musical or ritual expression. The writer has often witnessed this. Mrs. Stevenson has called attention to the practice also:

"The Sia sometimes adopt the poet's license in their songs and alter a word; for example, the name for 'badger' is tuopi, but is changed in the skoyo song . . . to tupina, because, they say, the latter word renders the stanza more rhythmical."[10]

Ocara is undoubtedly merely an example of such poetic license.

To turn to another example: Parsons tells us that *here in the light*, a phrase in a Hopi prayer, is "an archaic way of saying *in this*

[5] Ruth L. Bunzel, Zuni Ritual Poetry, BAE-R 47.620, 717, n. 61; Washington, 1932.

[6] See glossary of Keresan terms in L. A. White, The Pueblo of Santa Ana, New Mexico, Memoir 60.15–21, American Anthropological Association; Menasha, Wisc., 1942.

[7] Op. cit., p. 20.

[8] L. A. White, The Pueblo of Santo Domingo, New Mexico, Memoir 43, 203. American Anthropological Association; 1935.

[9] AES-P 8.1.xii.

[10] M. C. Stevenson, The Sia, BAE-R 11.123; Washington, 1894.

life."[11] But the Pueblo Indians frequently employ metaphors or other kinds of poetic expression in their prayers and ritual speeches. Thus *smoke* often means *mist, plumes* may mean *clouds*, etc. Certain figures of speech are employed in speaking of the bear. One says "I husked the corn" instead of "I skinned the bear"; "I eat roast corn" instead of "I eat bear meat," etc.[12] There are countless examples of expressions of this and similar kinds among the pueblos. But we can see no valid reason for calling them archaisms; they are simply metaphors or circumlocutions.

Ethnographers among the pueblos occasionally discover that there are two words for the same thing—two words for dove, kiva, to dance, etc. One of these words, he finds, is employed in ordinary discourse; the other appears to be used less frequently and then in special situations only. The ethnographer frequently accounts for this by saying that the word less commonly used is archaic. Thus Stevenson speaks of an archaic word for ceremonial chamber,[13] and archaic words for man and woman.[14] We have already noted Cushing's examples of archaisms. The present writer once called one of two words for white at Acoma archaic.[15]

It is true, of course, that archaic words like sup or quoth in English, for example, are not employed in ordinary discourse but appear only in certain contexts. But it does not follow that words not commonly employed in ordinary discourse, or used only in special situations, are necessarily archaic. Many ethnographers have apparently fallen into this fallacy.

We would not declare flatly that these special words are NOT archaic. To do so without supporting evidence would be as unwarranted as the unsupported claim that they are. It may be that some, or even all, of these special terms are archaic. But, to think of them as archaisms only is to overlook a fact of prime importance in Pueblo life: these special words are first and foremost ceremonial terms.

We have discovered at the Pueblo of Santa Ana a well defined ceremonial vocabulary. It consists of words which are used only on ceremonial occasions, in ritual contexts. These words are the exact semantic equivalent of words employed in ordinary discourse. Thus when speaking of the Mountain bluebird in ordinary discourse one says coroyá. But in ritual contexts one always says sto·c. There are many words and phrases of this sort as the following list shows; and our list is probably far from complete.

[11] E. C. Parsons, Pueblo Indian Religion, 2 vols. p. 314, fn. §; Chicago, 1939.

[12] White, The Pueblo of Santa Ana, p. 315.

[13] Op. cit., p. 78.

[14] Manuscript No. 503, Bureau of American Ethnology.

[15] Stirling, op. cit., p. 14, fn. 21.

2. Ceremonial Vocabulary at Santa Ana Pueblo

	Common term	Ceremonial term
beads	oDIGμ'nᵊi	itsátyunyi
bluebird (1)	coroyá	sto·c
buckskin	pi·ts	G'awacpikaiyanyi
cigarette	tsamɪst	wi'·cpi
clothing	onaDi·st or wákμ'nyi	ti·mɪ
corn	yak'a	ya·mμnẏɪ
corn meal	pɛ'tana	sμtranaiya G'a·co (2)
dance	ó·tcɪnyɪ	wisti'anyi

	Common term	Ceremonial term
domestic animals	hi'akats	tsi'akatsɛ
eagle feathers	Gyami ha·pi (3)	Gyinyiya·mɛ
eat	tcá'apɛ	posikomɛ́ (4)
field	tsai'tco	stiraʙaima
flour	ckúri·nɑ	i''nawi
flower	kakutcráti	akʉ́tc^{ti}
gówatcanyi	gówatcanyi	tsamahi'ya (5)
house	katcrútya	a'tcɑn
Koshairi	Koshairi	hi'tcratsi (6)
Kwiraina	Kwiraina	mi''yona
ladder	wá·ʙiya'ma	wa·kos
lightning	kopéstotsa	ʙó·trowicti
man	hátctsɪ	pai'yatyamɑ
mountain	ko·t^{i}	dyai'yatcɷnyi
pueblo	ha'ástitc	K'o'asaiya (7)
rain	ka·tca'ata	ci'wanɑ (8)
road	hia·wa	hiya·n^{yi}
seeds	gawai''aiti (9)	hi''·tcranyi
snow	h'a·wɛ	naback'^{a} po·tca (10)
staff of office	ya'·pi	k'atcacó^{mɛ} (11)
tobacco	h'ami	h'a·mi pai'ats (12)
trees	kiwatsɛ	ckacomit^{ya}
turkey feathers	tsinɑ ha·pi	tsinɑ ho·sɛnyi (13)
water	tsɪts	G'awaweima G'ai'kamɛ (14)
water bowl	wa'tyonyi	tyu'onyi
willow sprouts	hɷtck'awa	cpɷcpɷk'a
woman	k'o'itsa	k'o'·tcɑɪnak'o
you may go now (15)	omʉ́'na	po·tiyak'o'ó

3. Notes on the above terms

(1) This is the Mountain bluebird, *Sialia currucoides*.

(2) Naiya means *mother*; svtranaiya *our mother*. No translation for G'a·co could be obtained, but it was said that svtranaiya G'a·co refers to *our mother Iatik*.

(3) Gyami means *eagle*; ha·pi *feather*. No translation was obtained for Gyinyiya·mɛ.

(4) One informant said that one might say catcawatsiɒya'nyɛ' instead of posikomɛ'.

(5) The gowatcanyi are the helpers of the Pueblo War captains. Tsamahiya is the name of one of the war gods. It is also applied to other things (cf. *White, The Pueblo of Santa Ana, p. 306*).

(6) The Koshairi are also called Pai'yatyama in ceremonial contexts.

(7) This word is frequently found in migration myths; it has sometimes been mistaken for a proper name.

(8) The anthropomorphic rain gods, the katsina, are also called ci'wana (shiwana).

(9) This term occurs frequently in prayers which might suggest that it is a ceremonial term rather than a common word.

(10) Naback po·tca is said to mean *let it snow* or *may it snow*. But naback is the name of the white cotton robe or blanket worn by women on ceremonial occasions. This would suggest that the phrase might mean, literally, *Let a white blanket* [of snow] *cover* [the earth].

(11) This word resembles kástotco'ma, the long decorated pole carried in dances for the patron saints of the pueblos. The similarity of terms may be due to the similarity of the objects designated: both are staffs, although different in size, dress, and function.

(12) H'a·mi is the common term for *tobacco*; no translation could be secured for pai'ɑts.

(13) Tsinɑ means *turkey*; ha·pi *feather*. Ho·sɛnyi means *woool* or *hair*; the wool of sheep is called ho·sɛnyi.

(14) G'awaweima means *holy* or *sacred*; G'ai'kamɛ *water*. The informant said that holy water in the Roman Catholic church could be called DODATC G'ai'kamɛ. DODATC is the Keresan name for a Catholic priest; its etymology is unknown.

(15) Phrases like this are employed in ceremonies in such situations as dismissing a helper, or the hano sicti (*common people*), at the conclusion of a ceremony.

4. After obtaining the above vocabulary at Santa Ana the writer did some work on this subject at the Keresan pueblo of Sia. In addition to duplicating some of the data from Santa Ana, the following ceremonial terms were noted: Bɛ'wits^{a} is the ritual word at Sia for *food*; opɛ'·wi, the ordinary word. In ceremonial contexts the crow (Corvus brachyrhynchos) is called mákaiyɛ hátctsɛ. Hátctsɛ means *old man*; no English equivalent was obtained for mákaiyɛ; it may be a proper name. In ordinary discourse the crow is called stci''ra at Sia, as it is at Santo Domingo.[16]

5. If there is any general principle which determines whether or not a thing shall have two designations, a ceremonial term and a common term, we could not discover it. A principle readily suggests itself, to be sure: Those things which are essential, or prominent, in ceremonies or in sacred mythology shall have special ceremonial terms. This is a plausible principle, but it does not fit our facts. Thus we have ceremonial terms for rain and lightning but none for clouds, fog, mist, thunder, or rainbow. Clouds certainly seem to be as important in myth and ritual as lightning. It is curious that we should have a ceremonial term for the Mountain bluebird (about which we know nothing else) and no ceremonial term for owl, parrot, and roadrunner who (or, whose feathers) are quite prominent ritually. Our informant declared that there are no ceremonial terms for sun, moon, and stars, which seems strange considering their importance, the sun and moon especially, in Pueblo religion. The puma, badger, coyote, shrew, etc., are important spirits but we have no ceremonial terms for any mammals at all. Neither did we secure one for snake. It is curious that we should have a ceremonial term for beads but none for turquoise; odd that we should have a ceremonial term for willow but none for spruce which is used so much in sacred dances and in prayerstick making. It is not entirely clear why beads, clothing, buckskin, and eat, should have special ceremonial terms, although we note that gifts of these things and food are frequently made to spirits in myth and ritual.

The reasons for the existence of ceremonial terms for other things in our list are fairly clear: water, lightning, snow, and rain are of paramount importance in prayer and ritual. Tobacco, corn meal, cigarettes, staffs of office, and feathers are prominent in ritual. The "road" is the path of sacred corn meal over which men and gods walk on certain occasions. Koshairi, gowatcanyi, men and women are spirits. Mountains are important land marks on the mythologic landscape. Houses have a religious significance. Many of the important gods are said to live in houses; there is a house at each of the four corners of the earth.[17] Ladders too are important ritually.

It is significant to note that in many of the quotations cited earlier in this paper, the ceremonial character of the so-called archaic words is expressed or implied. Thus Parsons says that "at Zuni archaic terms for lreationship are used in smoking ritual."[18]

[16] White, The Pueblo of Santo Domingo, p. 204.

[17] White, The Pueblo of Santa Ana, p. 80; Fig. 5, p. 81.

[18] E. C. Parsons, Laguna Genealogies, Anthropological Papers, American Museum of Natural History, Vol. XIX, Pt. V p. 148; New York, 1923.

White observes that the archaic word for white at Acoma is "used only ceremonially."[19] The archaisms cited for Zuni by Cushing appear in "prayer-songs" and in myths. The archaic language of Acoma is found in the sacred origin myth.[20] Stevenson finds an archaic word for ceremonial chamber. Thus the ceremonial character of these special terms is clearly indicated in some statements and suggested in others. But ethnographers, dominated by the concept of the archaic, have failed to realize that they were confronted by a special ceremonial vocabulary, or have failed to appreciate that fact.

6. In view of the foregoing it is a bit surprising to learn that the existence of a special ceremonial vocabulary among the Pueblos was discovered and recognized forty years ago. In 1903, the late Dr. Aleš Hrdlička published a brief note on A Laguna Ceremonial Language, in the American Anthropologist.[21] An "especially well educated and trustworthy" Laguna Indian told Dr. Hrdlička that "some of the old men of Laguna know and still use in certain ceremonies an archaic language which the younger generation can neither speak nor fully understand . . . this ceremonial language is known as Hamasija, which according to . . . [the informant], means, approximately 'old', 'ancient'." Dr. Hrdlička lists some thirty words in this "old" language together with their equivalents in "present Laguna." Here again we note that ceremonial words are called archaic.

7. There has been some casual and incidental recognition of a ceremonial vocabulary among the pueblos. Thus, in a footnote in Pueblo Indian Religion,[22] Parsons alludes to a "ritual vocabulary as among the Keres." And in her Isleta, New Mexico, again in a footnote, she notes that "Leachi is the ceremonial term for rain, lurto, the vernacular."[23] Curtis speaks of "ceremonial color terms" at Zuni.[24] But, on the whole, Hrdlička's discovery has gone unnoticed,[25] and nowhere, except in his brief note, have we found a clear recognition and an adequate appreciation of this important Pueblo trait.

We have cited evidence indicating the presence of a special ritual vocabulary at Hopi, Zuni and among the Keres. We have no data at hand on this point for the Tewa, Tigua and Jemez, but it would be reasonable to expect to find it among these pueblos as well.

To refer once more to the possible archaic character of these ceremonial words: We noted that Hrdlička's informant spoke of them as constituting an "old language." Informants have a tendency to attribute great age to many things that they do not understand well, or to things that are very sacred. Their excuse sometimes for not being able to explain some words properly is that the words are "very old." But the Indian's conception of antiquity is often faulty. Horses, cattle and sheep are often mentioned in origin myths. A Hopi once told the writer how two bronze bells in his custody had been brought up from the womb of the earth when the people first came out. And he customarily explained political events of the past decade by tracing their antecedent causes to "the beginning." We cannot simply take the Indian's word for it in matters of this sort.

It is well known that many things—art forms, verbal formulas, articles of paraphernalia, patterns of behavior, etc.—imbedded in sacred contexts often tend to persevere without change for a very long

[19] Stirling, op. cit., p. 14, fn. 21.
[20] Stirling, op. cit., p. vii.
[21] Vol. 5, pp. 730–32.
[22] P. 312; see, also, p. 623.
[23] E. C. Parsons, Isleta, New Mexico, BAE-R 47.330; Washington, 1932.
[24] E. S. Curtis, The North American Indian, Vol. XVII. 206; New York, 1926.
[25] I did not learn of Hrdlička's article until after I had discovered the ceremonial vocabulary at Santa Ana myself.

time. Thus sacred words might become archaic because they are sacred. But we cannot rely wholly on this reasoning here. We have no reason to believe that *to eat* is more sacred than *to drink*, yet we have a ceremonial expression for the former but not for the latter. Game animals, for which we have no ceremonial term, are certainly as sacred in Pueblo religion, we believe, as domesticated animals, for which we have a ceremonial term.

Neither can the mere fact that ceremonial terms are restricted to certain situations and personnel be adduced to prove their archaic character. Neutron, penicillin, and societal are restricted in use in our society, but they are not archaic; quite the contrary.

We do not wish to declare that words and phrases in the Pueblo ceremonial vocabulary are not and cannot be archaic. Some, or perhaps even all, may be. But no one should accept them as archaisms without evidence, and, so far, this has not been supplied. Secondly, it should be noted, there may be many archaic words in the language that have no special ceremonial significance. Thirdly, and finally, granting that some or all of them are archaic, we should not allow this characteristic to obscure or conceal a fact of much greater ethnological importance: their special function as ceremonial terms. As ceremonial terms these words are just as modern, just as meaningful and significant, just as vital and indispensable as any other class of words in Pueblo culture. Daily and yearly life could not be carried on without them.

8. Summary and conclusions: The common tendency to call exceptional words among the pueblos archaic is, for the most part, unwarranted. Many of these words are not archaic at all, but are (a) foreign loan words, (b) words whose pronunciation has been changed for reasons of euphony or rhythm in song or prayer, or (c) metaphors or other poetical expressions. There are many instances in which two synonymous words exist for the same thing. One of these words is used only in ceremonial contexts, the other is employed in ordinary discourse. The aggregation of words restricted to ritual use constitutes a special ceremonial vocabulary, a vital instrument in the religious and ceremonial life of the pueblos. These ceremonial words may also be archaic, or they may not; we have no definitive evidence on either side. But, archaic or not, their chief significance lies not in their antiquity, but in their vitally important ceremonial character and function.

THREE TLINGIT STORIES

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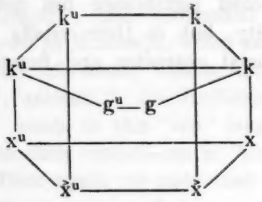
The following three tales in the dialect of Łàwák (i.e. Klawock on Prince of Wales Island) were dictated to me by Mr. Lester Roberts, the native informant who told me the two Łingít stories previously published in this journal.[1]

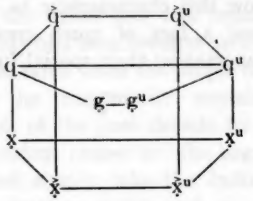
Boas's transcription of Tlingit,[2] which has been employed[3] in this as well as in the earlier paper, is entirely phonemic—with the exception of the use of the symbol o, which stands for a comparatively rare allophone of /ɑ/ or /a/ after labials. The phoneme inventory of Tlingit comprises 8 vowels and 41 consonants. The vocalic phonemes can be symmetrically arranged as follows.[4]

	Front		Back	
close:	i	e	a	u
open:	ɪ	ɛ	ɑ	ʊ

This system furnishes 16 distinctive syllabics because a vowel may take either high pitch (cf. x̱át *salmon*, tú *inside, interior*) or low pitch (e.g. x̱àt *root*, tù *mind, thought*). There is also a non-phonemic variation between low and indifferent tone, which appears to be based on the sentence rhythm. Stress[5] and quantity are non-distinctive. The opposition of high and low pitch is neutralized in the case of the suffixes -dɛ, -yɪ, -yɪn [and their variants -ɪ(n), -wʊ(n), -ʊ(n)], which take high tone when attached to syllables of low tone and vice versa (cf. X, 71; B 11). In the verb system there is a morphophonemic variation of open and close vowels (see X, 70), and also of /ɑ/ (/a/) and /ɛ/ (/e/); cf. B 18, 25–7.

The consonant system is rather intricate and unusual. There are no labial stops, spirants or nasals, but on the other hand there exist no less than ten rounded (or labialized) back consonants. The pattern of the palatals and velars may be represented in the following manner.[6]





Any two phonemes which are separated by a single straight line differ in respect to

[1] Vol. X, p. 65ff. Concerning the peculiarities of the speech of Klawock, the southern-most dialect of Tlingit, cf. pp. 65, 69f. This paper will be referred to below by the number of the volume and page.

[2] In his Grammatical Notes on the Language of the Tlingit Indians, U. of Pennsylv. Muesum Anthropol. Publ., vol. VIII, no. 1, 1917. This work will henceforth be quoted as B (followed by a page number).

[3] With a slight change in the choice of symbols for the laterals; see X, 65.

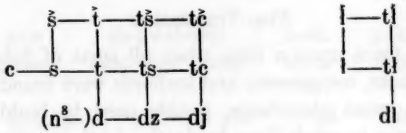
[4] Regarding the "distinctive feature" involved in differentiating open vowels (voyelles de perceptibilité majeure) and close ones (v. de perc. mineure), cf. Roman Jakobson, Proceed. of the Third Internat. Congress of Phonetic Sciences, p. 34ff., Ghent 1938.

[5] As to its distribution, cf. X, 66. Note that in the text given below all syllables not marked with an accent have unstressed vowels of low or indifferent pitch.

[6] The rounded back consonants, k^u, q^u, x^u, etc. must be regarded as single phonemes because they differ phonemically from kw, qw, xw, etc.

ONE distinctive feature, and their relationship is matched by that of several other pairs of phonemes.[7]

As regards the other consonants, there are, in addition to /y/, /w/, and /h/, 13 alveolars and 5 laterals, which form the following patterns.



We have represented the affricatives as single phonemes. For if they were to be considered as di-phonematic, we should have to state that Tlingit possesses the phonemes */z/, /ž/, and /l/ (occurring only after /d/), a somewhat absurd assumption which would lead to unnecessary complications.[9] If the number of Tlingit consonants seems, therefore, fairly high, it should be remembered that a comparison of the relative wealth or poverty of phonological systems is a matter of counting, not the phonemes, but the distinctive features. Actually, the Tlingit consonant system has only two more such features than has English.[10] These are glottalization and rounding, i.e. oppositions of the type /k—k̓/ and /k—kʷ/.

The great majority of Tlingit forms consists of no more than three phonemes; the type CV appears most frequently.[11] Clusters within a morpheme (except for consonant + w) are extremely rare, although they occur quite commonly at the juncture of morphemes. The forms set off by hyphens in the Tlingit text given below represent single morphemes, except for a few formations difficult to interpret or previously analysed (X, 70ff). The glossary at the end of this paper will contain only forms not recorded in vol. X, p. 70ff.

[7] That is to say, they form a "correlation"; cf. Trubetzkoy's definition of phonemic oppositions, TCLP 7.60 ff.

[8] The opposition /n—d/ is not a correlation since it has no parallel in Tlingit.

[9] It is significant that Tlingit spirants and simple laterals do not have voiced allophones. All stops and affricatives, e.g., become voiced before certain suffixes; cf. B 14.

[10] But English, on the other hand, has a subdivision of the liquids, i.e. the opposition /r—l/, which is lacking in Tlingit.

[11] In the speech of Klawock, morphemes consisting of a single phoneme occur somewhat more frequently than in the other dialects, owing to the shortening of certain verb classifiers; cf. X, 69.

The Swans

Tc̓ák[u]	ldàkát	yé-dɛ́	gáx[u]
Long ago	every	kind-of	duck,
qàx̣	qa	kɪ-n-da-tcùnét	tɬax̣
merganser	and	mallard	much
wà	c-ya-da-hén-ɪ	sayú	a-ya-yɪ-x́
thus	abounded	when,	before them
át	dʊ-ɬ-yɛ́x̣-nù-dj-ín		a-t-x̣à-yís.
things	one used to build		for eating.
hín-yɪ-k-x́	àyú	hít-k̓	yɛ́x̣
Streams-in	then	small-house	like
át	dʊ-ɬ-yèx̣-tc	tc̓a	a-yɪ-t
thing	one would build	just	inside
a-hán-ɪ-yɛ́x̣.	a-x̣a-wùɬ-x́	àyú	tcʊ
for one to stand.	Opening-at	then	only
yè-ya-gʊ́átɬ'-k̓	has	dʊ-a-t-x̣à-yɪ́	
a little	their	feed-of	
x̣át-kahág-ù	á-dɛ́	has	a-ku-ɬít-tc
fish-eggs-of	there	they	would scatter,
yú	hít-k̓	nà-dɛ́	tc̓a
that	trap	side-to	just
c-ya-da-hén-dén.		tɬɛ	ya-qʊ-na-x̣èn-ɪ
abundantly.		And	along feeding
àyú	yú	qàx̣	kɪ-n-da-tcùnét
when,	the	merganser,	mallards,

tću tća dàsá tćas yú hít
even still else, just that house

ẋa-wùł-náẋ nèłdé yà-łdíẋ na-tság-i
opening-at inside-to necks poking

àyú a-ká-ẋ yú sá
when, off that then

ka-dv-wa-tíẋ-k. Tłex yákyi kà-náẋ
one would wring. One day's course-in

àyú naśk-djɪnkàt tłaẋ tłága
then three-tens quite usual

wv-da-cát-ẋ sa-tì. tłex yákyi àyú
taking was. One day then

tłe-náẋ qá tću dv-hít-K-i-yi-ẋ át
one man just his trap-in thing

ya-wu-yègí deẋ gúgł'
awaiting, two swans

a-ẋa-wùł-náẋ nèł qu-wa-ẋá tłe
its-opening-through in moved, and

tću deẋ a-ca-wa-tłèqu. dv-hít-K-i
even both them caught. His trap-of

yi-dáẋ dàk has ac-sa-xát
inside-from out they him dragged

àyú tca tća íx-dé
when, then thus downstream

ac-ìn has ka-w-tł-łàtł. tłe
him-with they flapped. Then

yú gi-yí ká-ẋ dèkí-ẋ dàk
that bay's surface-on shore-from out

has ka-i-łátł àyú tsa a-ká-ẋ
they had flapped when, then off

à sá kà-wa-tíẋ. à-ẋ àyú
thing that twisted. There-after that

dv-yi-ẋ dàk yáku wa-há tłe
his side-to out canoe went and

à-ẋ yán ya-w-dv-wa-ẋà dv-gúgł-i
thence ashore they brought his swans

ìn.
with.

Free Translation

Once upon a time when all sorts of fish ducks, mergansers, and mallards were found in great abundance, people used to build traps to catch them for food. In the creeks and rivers they would set up structures that resembled a small house just large enough for one man to stand in. Then they would sprinkle fish roe as bait, increasing the amount in the direction toward the opening of the trap. And the man inside would wring off the necks of the mergansers, mallards, and other water fowl that came along feeding on the bait and stuck their necks into the trap. A bag of thirty birds was then considered a fairly normal day's catch.

One day, while a man was keeping watch in his trap, two swans followed the bait and strayed inside. He caught hold of both of them, but they flapped their wings, dragged him outside, and pulled him downstream with them. Only when they had got far out across a bay did he succeed in wringing their necks. A canoe then went out after him and took him ashore with his swans.

The Man who Arose from the Dead

Tłe-náẋ yís qá tćáku
One young man long ago

wu-nà. naśk yákyi ít-dáẋ àyú
died. Three days after that

qúẋ wv-t-gú-t. qù-n a-ka-w-ł-nìk
back came. To people that told

àt yú kà-wa-gùd-i-yé qa
place that had gone to and

wà-sá qʊ-nî-g-ín. wé-gaw yú dɛ́ yík-t wa-gʊ́t. tɕa
how that had happened. That time the road upon he went. Just

qʊ-n-ga-ná-n-ɪn a-dà-dɛ́ gù-dáx sá yú át cɪ́
when some one died his-outside-to place-from that the thing song

cɪ-t-cî-nʊ̀-tc qa a-dà-dɛ́ tsʊ wʊ-dʊ-wa-áx yú dɛ́ tɬɛ́ɬ
songs sing and his body-to also one heard that road not

gaw dʊ-gwáɬ-nʊ̀tc naśk yákyi qu-dax-hítɬ'-k-nʊ̀tc tɬe tɕa gù-dáx
drum beat they would three days there anything was, but just wherefrom

kà-náx. yú yís qá àý sá yán cù-wa-tán tɬɛ à-x
through. That young man that that quite it ended then therefrom

yè-c-ka-ɬ-nik tɬɛ wu-nà-yí yú dè a-cʊ́ qʊ-ga-s-tî-tc tɬɛ
told: then when dead, the road its-end would appear and

dʊ-dà-í-t tu-dáx kè-wa-gùt. qíx-ɪ tú-t wʊ-gùt-tc. tɕa
his body-of inside-from he came. thicket inside he would walk. Just

dʊ-dà-dɛ́ gáx-sa-tɬ-yɪ́ xùt gù-dáx sá kè-cɪ-ka-w-dʊ-wa-cí
His body-to crying ones among wherefrom that they began to sing

wu-gùt qa has dʊ-tù-dáx tsʊ yú dʊ-ckʷá dè qʊ-ga-s-tî-tc
he walked and their minds-from also that before him road would appear

yéx qu-wʊ-s-há. dʊ-dà-qèd-ɪ́ tɬɛ tsʊ gonέ wʊ-gùt-tc. wà
seemingly something cleared. His coffin-of and again begin walking would. So

yík-x dʊ-nà-wʊ́ ga-ts-tá àý yè-ku-yáɬ yà-na-gʊ̀d-ɪ́ sawɛ́ á
inside-at his body was laid when, long had walked when, lake

kè-cɪ-ka-w-dʊ-wa-cí tɬɛ yú hít xa-yàx-t wa-gʊ́t. yú
songs they sang; and that house shore-along went. The

ixi-yá xa-hát dʊ-xa-nà-dáx dʊ-ki-kànáx qʷù a-wu-s-tîn-ɪ́
side-place door his front-side-from across from him people seeing

cʊ-ya-w-tc-xɪn. gán-ɪ yʊx àý a-cʊ-kà-wa-xɪtc qa yàkʷ tsʊ
opened. Out of house outside when, to them waved and canoe also

na-gùt àý tɬɛ dɛ́ kù-wʊ́x a-wa-xùx. ayéx-ayʊ́ dʊ-yî-t yàkʷ
had gone when, then road wide one requested. Just so under him canoe

ká-t a-wʊ-tɬ-gín. à-x àý tɬɛ wa-qúx tɬɛ dè yà-dɛ́ yàn
upon looked. After that then came and so across ashore

ya-w-dv-wa-x̣à. aẋ àý a-kà-wa-nìk wà-sá yú a-ká-x̣
was taken. There then that told how that thence

a-wv-s-kú-wv̀ càwát a-wv-s-tìn. ka-na-dà-yí hín kè-a-k^{u}gwa-dè-yí qa
known woman her he saw. flowing creek it he would find and

à-n yú x̣a-ła-át-g-i àý yé wà-sá yáx̣ a-ka-gv-x̣-sa-níg-v̀
With her that speaking when, thus how entirely it he might tell

ac-ya-w-s-qà qúx̣-dɛ̀ na-gú tɛ́u gaw gu-de-sá ka-na-dà-yí. à-x̣ àý
to him said: back go yet time which way it flowed. There then

i-ú-wv. yá-x̣ t̓íx̌-dén hà-í-x̌ yán ac-cv-ka-wa-djá gù-t-ga-sá
you-have-while. Here hard-like us fully him she informed at what time

yè-dji-ts-nɛ́ yú x̌égà tłɛ́ł dv-ká-t ya-ga-x̣-t-dà-yí. ayɛ́x̣-ayv̀
they make work; that surely not him one would trace. Just so

qà-ya-á-k-x̌ q^{u}a tsv yát- à-x̣ dàk ac-yù-x̣á a-ki-kà-dɛ́
people's place-at however even more there from shore him took across:

yànáx̣ qù-x̌ àt tłɛ́ł has wv-ts-tìn. wà
than here for them there not them one saw. Thus

dv-ts-t̓íx̌. agá-aý yé ac-ìn yù-ku-gv́t-g-v̀ saý yú hín ká-x̣
they make hard. Then thus to him walking along when, that water upon

a-ka-wa-nìk yú a-yík-t yàn wu-gùt. tɛ́a à-dɛ́ ac-ìn
that told that aboard ashore he came. Just as to him

ya-w-dv-wa-x̣à-yí yàk^{u} yú á a-kà-wa-níg-i-yé yɛ́x̣ àý a-wa-t̓ì.
they had taken canoe that lake it she had told so that found.

ta-ká-t táx̣^{u} às-x̌ x̌égà sa-tì-yí. dàgénax̣ ka-na-dà yú hín.
bottom-on sunk log really had been. Slowly flowed that creek.

yú càwát x̌é-dɛ̀ qu-wv-ts-àx̣ ldàkát yá gaw yú kà-nà-wv́
The woman's talk-to listened, All this time the dead one's

ayɛ́x̣-aý a-x̌é-t dà-dɛ́ c-x̌a-da-gwàł kɪk-náx̣ àt
accordingly her-talk-after body-to beating time along there

tù-wv-t-cát tłɛ a-x̌è-wa-wús dv-cí. tɛ́a gù-x̌-sá a-x̌á-x̣
his mind changed, and her he asked they sang. Just when that sound

wà-sá qúx̣-dɛ̀ k^{u}gwa-s-né-yi. ac-ìn cv-ya-w-t-xíx tłɛ yú dè cú-t
how back he would get. To him end reached then that road end-to

wu-gùt-tc tłe qí-xł tú-t wa-gút tłe téu c-ìn
he would get and thicket into came and just himself-with

wu-gùt-tc. agá-ayú tłe a-ká-t a-wu-ts-nùk^{u}. wà yú has ku-àt
would walk. Likewise then about it it he took. As there they walked

sa-x̌àq^{u}-tc gu-de-sá ka-na-dà-yí yú sayú has du-àn-íx̌ qúx̌ has
would forget whither it flowed that when, their town-to back they

hín. à-dé ac-cu-kà-wa-djá-yi-yé wu-át. nèł-dé wu-na-s-nùk^{u}-dáx̌
creek. As him she had informed came. House-to he had taken

yéx̌ àyú tłe hín-x̌ àyú nèł-dé wu-gùt. nèł-gùt
exactly as, then water-in when, home he went. Home came

ya-ga-s-í-tc gone át àyú tca-ás téu du-dà-dé
face would put at first thing when, right there still over him

ka-w-t-cí-yi. a-náx̌-ayú tsu gáx̌ du-s-tì-yí tłe yà-na-gúd-i
of singing. Thereby again crying they were and going

wu-s-kú-wù-tc gu-de-sá ka-na-dà-yí du-dà-í-t tú-x̌ wu-gùt. téu
he would know whither it flowed his body-to inside he got. Yet

qa gu-de-sá yán-dé a-yá-k ican-dén qu-x̌a-ya-qà-yí àyú
and whither goal-to its front-to pityful-like wailing there was while,

ga-wa-s-hán-i. tłax̌ x̌égà ła-tsìn-dén qá-xux̌ ca-wa-t-núk^{u}. à-x̌ àyú
he should move. Very truly strongly men-among head raised. Then that

yé yán yú ac-ya-wu-s-qà tsu qù-n a-ka-wu-ł-nìk gu-tsá yú
thus fully that him she had told often: to them it he told where that

wà yá àt na-nín-i sá kà-wu-gùd-i qa wà-sá
however this there happens then he had gone and how that

łił yá-x̌ qúx̌ i-da-gút-dji-x̌. qu-nì-g-ín. ca-w-da-núg^{u}-ù-dáx̌ tłél
don't hither back you come ever. had happened. arising-after not

ayéx̌-ayú tcù-guna ka-ł-dzí yè-wu-yáł-i àyú àt łàw
Accordingly even though it was hard long that there news

tłél ayá wu-da-gùt. téù du-tc-xíx a-c-k^{u}á-t yákyi
not therefore went there. Just one brought: before that day

yà-na-gúd-i àyú atkátsku du-í-t wu-nà-yí atkátsku qúx̌ wu-da-gùd-i.
along walking while, child to him having died child back had come.

Free Translation

Long ago a young man who had died came back after three days and told the people where he had been and what had happened.

In those days, when some one died people would stay with the body for three days, singing songs and beating the drum. And that young man said that after he died he left his body and hovered among the mourners and seemed to drive sorrow from their minds. When his body was laid out in its coffin the people began to sing. Suddenly the side of the house nearest him gave way like a door and he went through. Outside he saw a wide road and walked along it. As long as the singing continued the road lay open before him, but when it stopped the road came to an end, and he found himself in thick underbrush. As soon as the chanting began again the road would reappear, and he would start marching.

He went on for a long time until he came to a lake and walked along its shore. When he saw some people on the other side he waved to them and asked them for a boat. Just as he had requested, a canoe came, and the people took him to the opposite shore. There he met a woman he knew. When he talked to her, she warned him, "You should go back while there is still time. Here life is made very hard for us, and at the place you are headed for it is harder still." She also told him that the canoe in which he had been taken across the water was really a water-logged tree trunk that had come from the bottom of the lake. He listened to the woman and, following her advice, he changed his mind and asked her how he could get back. She explained to him how he could find his way by following the course of a creek, and how he would always be able to tell which way it was flowing. Then she told him when he could leave without being noticed. Thus they were not seen when she took him back across the lake. After that he walked and walked until he came to the creek. He found it exactly as she had described it. It was flowing very slowly.

All this time the mourners had been staying by the side of his dead body, chanting and beating time. Whenever their singing stopped he would come to the end of his road and get into dense underbrush. At these moments he would also forget which way the creek was flowing. As the woman had instructed him, he then put his head into the water until the singing started again; then he would remember the direction of the current and of the way home. Very strongly she had impressed upon him, "No matter what may happen, do not ever come back this way." Therefore, however difficult he found it, he never turned back.

While he was on his way, a child came toward him, and he took it along. After a long walk they finally reached their village. When he had taken the child home, he went to his own house and found the people as he had left them, wailing over him. Walking straight up to his body, he got into it, and while they were still crying pitifully he arose among them. Then he told them where he had gone and what had happened to him.

Not very long after that some one brought the news that a child who had died the day before had come back to life.

The Origin of the Killer Whale[12]

tc̓ák^{u}	tle-náx	tc̓àk̓	qwán
Long ago	one man	eagle	tribe
àn qáwv	dv-ánuc-i	gâx	qa
chief,	his Russian	slave,	and
du-kán i	yà	has	na-qúx
his brother-in-law	along	they	paddled

[12] This is a common theme of Tlingit stories. Three versions, which are all quite different from this one, have been recorded by J. R. Swanton in his Tlingit Myths and Texts, BAE-B39.25,215,230; Washington 1909.

yú àn qáwᵘ dàx-ɪ kàɬé yík-t. a-k-ɬa-qàtc àyú tɬe a-x̱é
the chief canoe-of fine inside-at. Inflating it after, then its opening

wà-na-ní-sayú ítc-dà-náx yàn a-ka-wu-s-áx. du-xɪk-cá-dè a-k-sa-áx
Finally rock-outside-from ashore it he tied. his shoulders-to it he tied

has ga-qùx-ú-t has tù-wu-tɬ-àt. àyú yàn nà-dé hín-náx wu-gùt.
they to paddle they had in mind. when, shore side-to water-in he went.

téu yú àn qáwᵘ yàn-dé wu-yéx̱-ɪ na-ɬé du-tù-wú qᵘa
Just the chief shoreward being It being far, his mind however

àyú du-gùx-ú yú ítc-dà-dáx dàk wu-ɬ-tsìn ayéx̱-ayú yàn
while, his slave that rock-from to sea strong was and thus shoreward

wa-qúx̱. yú gùx̱ ɬàtɬ wa-hù. ɬe-dén ɬ-sà-dáx̱ àyú
paddled. The slave owner he swam. Well having rested when,

kánɪ-tc wu-s-kú yú nɪtc-x̱ àn-t wa-gút.
brother-in-law-by it was known that channel-on town-to he went.

ítc ká-x̱ wuc-x̱ du-cát-x̱ dàx̱ ɬtà qa
rock surface-on altogether His wife-of canoe knife and

qu-ca-ka-t-qùwú. atc-ayú yú yàkᵘ c-nax̱-wàyɪ a-wa-x̱ùx̱. du-djɪ-t
would be covered. Therefore the canoe hatchet asked. His hands-to

tɬa-yúk qúx̱-dɛ a-ya-ku-ná. yú yè-ts-nè àyú tsu wu-qùx̱. tɬax̱
at once back it he ordered. The given when, again he left. Quite

gùx̱-tc qᵘa tɬél yè-a-sa-wu-hà. tɬágà qu-na-ɬé-t qùx̱ tsu
slave however not it moved. fair distance-over paddled, again

dáq ga-dá àyú yú yàn wa-qúx̱ tɬe ɬ dà-u-tɬ-cɪ-yí
Shoreward flow came when, the ashore went and not limbs having

àn qáwù qᵘa tɬél a-wu-s-kú á-dè às a-wu-ɬ-gítc-t. ka-da-tíy-ɪx̱ sa-tɪ
chief however not it knew where trees he felled. A carver he was

nax̱-ts-gìd-ɪ-yɛ́. wà yù-ku-gút-g-ù sayú a-yéx̱ àyú djɪnkàt yáy
to move. So walking along when, like because, ten whales

tàn nà-wú ká-x̱ wu-gùt tɬe a-ka-wa-tíy. à-x̱ àyú a-dà-dé át
sea lion dead one upon he came and carved. Then that to them thing

a-yùw-ú a-yík-dáx̱ kè-a-wa-xác. wu-cɪ qa à-n yú x̱a-wu-ɬ-át.
its stomach inside-from cut-out. sang and with them that talked.

tɛ̀u yé qʋ-ní-kʷ ày̨ú has dlèd-yɛ́x̣ à-wa-ú dɩyì-dɛ́ yú
Just thus doing while, they snow-like left: depth-to that

wa-tsín. aka-wu-ná-yì ày̨ú u-na-x̣áq qʋ-gà. a-dà-dɛ́
became alive. He sent them when, swimming was impossible. To them

tɬɛ dʋ-x̣á yɛ́x̣ hín-t has át cì-yí-dáx̣ qa à-n
then his-words like water-to they thing singing-after and with them

kawʋ-dʋ-wa-ƙén. tɬɛ kè has yú x̣a-tán-g-ì-dáx̣ has wa-tsín.
upon jumped. Then up they that talking-after they were alive.

kà-wa-wú tsʋ ɬèwʋ́-x̣ has a-ka-wu-ná-yì ày̨ú tɬɛ hín-t
floated, again wood they He sent them when, then water-to

wʋ-s-tì-yí-tc. a-dà yú has ka-wʋ-t-ƙít tɬɛ dàk-dɛ́ dàk
being. About them that they moved and to sea out

tù-tán-g-ì ày̨ú yé wa-djí has yà-wa-gú. tɛ́a yè-gʋ-yátɬ-ƙ
pondering when, thus he thought: they swam. Just not long after

gwał tɛ́a ya-tìy-í à ɬèwʋ́-dáx̣ tɬɛ qʋ́x̣ has ya-wa-gú ɬdàkát
maybe just carving thing wood-of then back they swam every

a-ka-tíy-n-ì tɛ́a-tɬex̣ yé has yé-dɛ́ x̣át qa ɬènèdí ìn.
if he carved some forever thus they kind-of salmon and seafood with.

qʋ-kʷgwa-s-tí. ayɛ́x̣-ay̨ú ɬdàkát yé-dɛ́ yú ka-da-tíy-ì tù-gá wu-tì.
will live. Therefore every kind That carver's heart-after was.

ɬèwʋ́-dáx̣ a-ka-wa-tíy tɬɛ́ɬ qʷa atc-ay̨ú yè-a-sa-wa-hà tɛ́a
wood-of some he carved, not however Therefore them he wanted just

ga-wu-c-tì. tcá-tɛ́a x̣áy hín-x̣ yè-na-ga-tì. àx̣-ay̨ú tɬɛ
it worked. But then yellow cedar water-in to remain. After that then

a-ka-tíy tsa yán a-ya-wa-dlák. yú ac-cu-dáx̣ wu-qùx̣-ín gúx̣
carved, at once quite succeeded. the his side-from having moved slave

x̣ànìt-ì ìn a-wʋ-ɬ-ɨ̀ùtc tɛ́a ìt-dɛ́ a-kà-wa-ná has
Charcoal with it he blackened just toward he them sent their

wà-sá yáy ya-tí tɛ́a a-yɛ́x̣ hè a-ga-djàg-í-t dʋ-kánì
as whale is just so, but killing him for, his brother-in-law

a-x̣a-dà qʷa tɛ́a qʷa qʋ́x̣ has a-ya-ga-x̣à-yí-t.
round their mouths however just however back their bringing him for.

tłeł yè-wu-yát-i ayú yú àn qáwù qa du-ìn du-tc-íx̱-x̱. kìt
Not long after, the chief and to him they show. Killer whale

dàx̱-i ká-x̱ has yà-wa-gú tłe tày-i uc x̱àn łtá-t i-ya-gix̱ yán-dè
his canoe upon they swam and fat if fire into you throw fully

yú gùx̱ has a-wa-djáq yú ya-ka-x̱-sa-kú hè x̱áy uc-ge tsu
the slave they him killed, that will notice, but cedar if also

atgáts-ku q"a qúx̱ has x̱àn łtá-t i-ya-gix̱ tca a-yéx̱
little one however back they fire into you throw just like it

a-ya-wa-x̱á tca du-í-t át ka-x̱-t-áx̱ yà-na-s-gánti. à-náx̱
him brought just to him thing will sound when burning. From this

wu-ti-gút. àx̱-ayú has ayú ga-x̱-sa-kú cx̱"à-náx̱ x̱áy-dáx̱
happening-without. After that their that is known: at first cedar-from

du-śàti-tc yé has ya-wu-s-qà łł kìt ka-wu-t-tìy-i.
master thus them told: not killer whale was carved.

x̱"an k"cè tsu qá yi-djáq
surely then again man you shall kill

x̱éq. ayéx̱-ayú tcu-guna tłél
ever. Accordingly, to be sure, not

has du-kà-náx̱ n-u-ga-tì-yí x̱át
their surface-above being fish

qu-s-tí tca-àn q"a tcu yá
will live, but still even this

yákyi-dè tłél qá has wu-djàq-tc.
day-to not man they have killed.

a-cú-yì-dáx̱ hín-t has
Their edge-from water-in they

kawu-du-wa-ƙén-i ítc-x̱ tcu yá
had jumped from rocks even this

yákyi qu-ts-tí. tça-àdu-sá
day exist. Any one

du-tù-wa-s-gú a-x̱ cu-ka-t-djé-x̱
his spirit moves about it is informed

Free Translation

Long ago a chief of the Tcàk people, his Russian slave, and his brother-in-law were out on the sea in the chief's fine canoe. Finally, after they had stopped at a large flat rock, they wanted to go back to shore. While the chief was still standing there, facing the shore, the slave suddenly paddled away from the rock toward the open sea. The brother-in-law of the slave's master, who knew that the waves would soon cover the rock, kept ordering the slave to turn back at once. But the slave paid no attention.

When the tide came in, the man on the rock did not at first know what to do. While walking up and down, however, he came upon a dead sea lion. He cut out its stomach, inflated it, and tied its opening. After fastening it to his shoulders he waded into the water on the shoreward side. He had to cover a great distance, but he was determined to get ashore, and he succeeded.

When he had rested on the beach he followed the channel to town and went home. He asked his wife for a canoe, a knife, and a

hatchet. With these he set out again. He paddled on for some time and then went ashore again. There he cut some tree trunks without knot-holes. He was an expert carver, and he began to carve ten whales out of this wood. After he had finished he sang to them and spoke to them until they came to life. Obeying his orders, they jumped into the sea. But suddenly they floated up to the surface because they had turned back into wood. Thinking this over, he imagined that perhaps they would stay alive for good if he carved them out of the right sort of tree. He therefore tried all kinds of wood, but it did not work.

Not until he used yellow cedar did he succeed. He blackened the wood with charcoal to make it look exactly like the color of whales. But around the mouths he left it white so that they would not be able to swim down too far. When he had sung to them and spoken to them they came to life. Upon his orders they all entered the water and swam out to sea. After a while they returned, bringing all sorts of fish and seafood with them. That greatly pleased the man who had carved them, and he wanted them to stay in the water. He ordered them to catch and kill the slave who had deserted him, and to bring back his brother-in-law. It did not take them long to reach the chief's canoe, and they killed the slave. The chief's brother-in-law, however, they brought back unharmed.

After that their master told them that they must not ever again kill a man. And although no fish that comes near them will stay alive, they have not killed another man to this very day. The rocks from which they dived into the sea are still there, and any one who cares to ask will be told all about it, and the place will be shown to him.

If you throw the fat of a killer whale into the fire you will notice that it makes a curious sound, exactly the same sound that burning yellow cedar makes. From this you can tell that killer whales were first carved from cedar trees.

Glossary[13]

á (B 123) *lake*
àdù *some one*, tɬa-àdu-sá (B 117) *any one*
atɬátsɬu (atɬátsɬu B 100, 168) *child*; cf. ɬa (B 144) *small*
atɣátsɬu (at-ɣa-ts-ɬu?) *being small, little one*
às (B 123) *tree, log*
-ás: tɬa-ás *right there*
-ac- (B 48) 3rd person animate object (not otherwise mentioned in the same sentence)
-àn: tɬa-àn (B 151) *still, anyway, nevertheless*
àn qá-wu (B 123) *town man, chief*
ánuc *Russian*
i *put, place*
ixi *side* (?)
ɩx̱ *show, point* (*out*)
ítc (B 123, 163) *rock*
uc (B 150), uc-gɛ *if, in case*
yá (B 113) demonstrative particle
yá, yá, yé (B 92, 104; X, 71) *place*
yáy (B 123) *whale*
yàx̱ (yàx̱ B 123) *border, edge, shore*
yègɩ (yek + -ɩ) *waiting*
yís (B 132) *young*
yù- (B 74) adverbial prefix, indicating progressive action
-yúɬ in tɬa-yúɬ (B 151) *at once*
yux̱ (yux̱ B 106) *outside, out of the house*
wàyɩ *hatchet*
wu *move, float*
wux̱ (wuq̓ [in Swanton's transcription] B 133) *wide*
wùɬ *opening* (wùɬ *cavity*, B 124)
wuś (B 133) *ask, inquire*
wuc (B 150) *together, on all sides*
ha, hen (X, 71; B 133–4) *move*, (with classifier sa-) *want*, (preceded by c-ya-) *be numerous, plentiful*
hát *door, opening* (hat *enclose, enclosure*, B 124, 134)
han (B 134) *stand* (used with singular subject only)
hè *but, however*
hitɬ *exist, be in the way* (?)

[13] Note that all the most common local, temporal, modal, adverbial, and pronominal affixes are listed in vol. X, 70ff.

da (B 135) *to flow, flood*
da, de *trail, trace, find*; cf. dè *trail, road*
dàgénaχ *slowly*
dáq (dáq B 107) *shoreward, inland*
dàχ *dug-out, canoe*
dė, dè (B 124) *trail, road*; de *to trail, find*
deχ (B 152) *two, both*
dɪyɬ (probably dɪ-yì) *lower side, depth*
tày (B 124) *fat*
táχᵘ *sunk*; cf. ta *bottom side* (X, 72)
tàn (B 124) *sea lion*
tiy *carve*; cf. kùtíyà *carved pole* (X, 72)
tɪχ (tɪχ, teχ B 136) *twist, wring*
ɬàw *message, news*
ɬatɬ *flap* (wings), *fly*
ɬíχ (ɬiq *ice*, B 125) *ice, hard*; ɬix *to be*, or *cause to be, hard*
ɬutc *blacken* (by fire); cf. ɬuś *broil close to fire* (B 138)
-g de-labialized form of -gᵘ, i.e. -kᵘ before the suffix -ɪ
gaw (B 127) *drum*
gaw *time*
gáxᵘ (B 127) *fish duck*
git (B 143) *to move*
gu *to move, swim*
gu-t-ga-sá, gu-χ-sá *at any time, at what time*
gʊátɬ *a little, not much* (?)
gwał (B 144) *to beat, strike*
gwał *perhaps*; cf. guɬ (B 151) *probably*
-k *on, upon*; see also kᵘ below
kahák (kahákᵘ B 127) *fish roe*
kàlɛ́ *fine, good*
kɪt *killer whale*
ku- contraction of ka-wa
-kᵘ, -k (B 84) frequentative suffix
c-kᵘá *in front, ahead*; cf. cχᵘà *at first* (X, 74)
kɛ *good, satisfactory*
kit (kɪt B 145) *move, leave, come out*
ga *be forbidden, be impossible*; cf. gas (B 145) *have as a taboo, be careful in the use of something*
gán (B 108) *outside, out of the house*
gɬ *bay*; cf. gey (B 128, in Swanton's transcr.) *head of bay*
gɪχ *throw*; cf. gitc, gɪtc (B 145) *throw*
gɛn (gen, gɛn B 145) *to look*
-gút *without*
gʊ́gɬ *swan*
gùχ (gùχᵘ B 127) *slave*
gʊna (B 128) *other*, tɛ́u-gʊna concessive particle
qàχ *merganser*
qatc *blow up, inflate*
qèt *chest, coffin*
qíχ *underbrush, thicket*
quw *enclose, cover*; cf. qùw (X, 73) *hiding-place*
qwán (B 128) *people*
xat (xaɬ B 147) *to pull, drag*
xɪk *arm*, xɪk-cá *arm-head, shoulder*
χaq *swim*; cf. q̓aq (B 146) *swim*
χaqᵘ *forget* (?)
χé-gà *really, truly*
χᵘan (χwan B 152) exhortative particle
-χ expresses a permanent state or a habitual occurrence; it is regularly attached to the predicate of the verb (-s-)ti *to be*; cf. B 83–4
χa (B 148) *bring, take*
χáy (B 129) *yellow cedar*
χéq *ever* (?)
χɪtc *move one's arm, wave, beckon*; cf. χitc (B 149) *throw*
χɪn (B 149) *to turn, open*
χuχ (χuχᵘ B 149) *to call out, call for, request*
χàn (B 129) *fire*
χàn-ɬt-ɪ *charcoal* (literally: *fire place from*)
ɬèw *wood, tree*; cf. ɬè-yís (ɬèyís B 129) *fir tree*
ɬènèt *seafood*
ɬɪ (B 122) prohibitive particle
ɬdɪχ (preceded by ya- *face, front*) *neck*
ɬtá *inside*
dlak (B 149) *win, overcome, succeed*; Boas records the northern Tlingit forms tɬaq, tɬaq and quotes Swanton's forms tɬak, dlak, dlaq.
dlèt (B 130) *snow, white*
tɬeqᵘ *seize, grab, catch*; cf. tɬeq (X, 73) *finger* (The glottalization of the initial consonant sometimes disappears when a noun is used in verbal function.)
tɬá-gà *fair(ly), usual(ly)*
sa (with classifier ɬ) *dwell, rest*; cf. sɛ (X, 73) *be near*

sa-ti follows upon gaχ *to cry*, when the verb (or participle) is used in the plural; cf. B 145

šàtí (šàtî B 91) *owner, master*

dzi (B 139) *to be difficult*

tsaq (B 139) *to push, poke, stick out*

tsin (B 139) *to be alive, strong*

càwát (B 126) *woman*

cát (B 126) *wife*

ci (B 140) *to sing*, cí (B 126) *song*, ci- reference to *singing*; Boas (71) records ca- as the northern Tlingit form of the incorporated noun.

cì (cìy B 126) *knot* or *limb of tree*

dja, dje (dja X, 74; B 140) *tell, inform, instruct*

dji (B 141) *think*

djʉnkàt (B 152) *ten*; cf. djín (X, 74; B 126) *hand*

tcá-tca (B 151) *just then, but then*

tcùnét (B 126) *arrow*, kɪ-n-da-tcùnét *mallard* (literally: *rising arrow*)

tcàk̆ (B 126) *eagle*

-n (B 85) conditional suffix

na, nɛ (X, 74; B 141–2) *do, work, send, order*

naχ- (B 36) variant form of na-ga-

naśk (B 152) *three*

ne *give, hand* (used with plural object); cf. ni (B 142) *carry, get* (several things)

nìtc *channel*

-nù-tc, -nù-tc (B 83) expresses frequentative action

nuk^{u} *take, carry, lift.*

LINGUISTIC REFLECTION OF WINTU· THOUGHT

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Anthropologists no longer hold the theory that cultures are a sum of atomistic traits, arbitrary and without meaning. We see traits now as functionally interrelated, or as expressive of a pervading pattern. Beliefs and practices which had been termed superstitions, are now granted a derivative status; we call them functionally significant or emotionally satisfying. But there is still an attitude of condescension. Too often we judge traits by our own Euro-American set of premises, and find them strange; but we say that, at any rate, they have function, or value, or meaning.

This basis for evaluation is inadequate for a clear understanding. The beliefs and practices of a society must be judged by the framework of premises of that society. They arise from that basis, and draw from it a logical validity other than their functional value in the restricted sense. On this assumption, I undertook the study of the Wintu· language. A language is an aspect of a particular culture, and, like that culture, has an inner cohesion; so that verbal and nominal categories, methods of word formation and derivation, all point to the same original premises. These, in turn, rest on a basic habit of thought or character trait which is characteristic of the culture. A study of the language of a culture, therefore, should uncover the framework of premises upon which the cultural behavior rests.

The Wintu· assumes that reality is, irrespective of himself. Reality is unbounded content; in this he finds qualities which are not rigidly distinguished from each other. Toward reality he directs belief and respect. Upon it, as it impinges upon his consciousness, he imposes transitory shape. He individuates and particularizes, impressing himself only within careful limits, performing acts of will with diffidence and circumspection. He leaves the content essentially unaffected; only in respect to form does he pass judgment.

On the presupposition of undifferentiated content, rest both his nominal and verbal categories. From his nouns, the Wintu· excludes a series of terms referring to kin; the rest all make reference primarily to generic substance. To the Wintu·, the given is not a series of particulars, to be classed into universals. The given is unpartitioned mass; a part of this the Wintu· delimits into a particular individual. The particular then exists, not in nature, but in the consciousness of the speaker. What to us is a class, a plurality of particulars, is to him a mass or a quality or an attribute. These concepts are one for the Wintu·; the word for *red*, for example, is the same as for *redness* or *red-mass*. Plurality, on the other hand, is not derived from the singular and is of slight interest to him. He has no nominal plural form, and when he does use a plural word, such as *men*, he uses a root which is completely different from the singular word; *man* is wi·Da but *men* is q'i·s.

To some one brought up in the Indo-European tradition, this is a position hard to understand. We know that the plural is derived from the singular. It is logical and natural for our grammars to start with the singular form of a noun or a verb, and then go on to the plural. When we are faced with words like group or herd or flock, we call them, as a matter of course, collective plurals. Words like sheep or deer, which make no morphological distinction between singular and plural, are explained on the basis of historical accident or the mechanics of enunciation. But to the

Wintu· it is natural to speak of deer or salmon without distinction of number; to him a flock is a whole, not a collection of singular individuals. To us, the distinction of number is so important that we cannot mention an object unless we also simultaneously indicate whether it is singular or plural; and if we speak of it in the present tense, the verb we use must echo this number. And the Greek had to do more than this; if he had to make a statement such as *the third man who entered was old and blind*, the words *third*, *who*, *entered*, *was*, *old* and *blind*, though referring to non-quantitative concepts, all had to reiterate the singularity of the man. The Wintu·, on the other hand, indicates number only if he chooses to do so. In such a case he can qualify his noun with a word such as *many* or *one*; or he can express plurality of object or subject through special forms of the verb.

The care which we bestow on the distinction of number, is lavished by the Wintu· on the distinction between particular and generic. But here is a further difference. Whereas we find number already present in substance itself, the Wintu· imposes particularity upon substance. We MUST use a plural when we are confronted by plural objects; the Wintu· CHOOSES to use a particularizing form. It is true that for certain nouns, such as those referring to live people and animals, the Wintu· uses a particularizing form almost always; that for substances which we, also, regard as generic, such as fire and sand and wood, he almost always uses a generic form. But these are merely habitual modes of speaking from which he can and does deviate.

His distinction, then, is subjective. He starts from *whiteness* or *white* (χayi), a quality, and derives from this, as an observer, the particular—*the white one* (χayit). With the use of derivative suffixes, he delimits a part of the mass. We take the word for *deer*, (no·B+·; the · is the sign of the particular in the nominative), for example. In the instances I give I shall use only the objective case, no·B for the generic, and no·Bum for the particular. A hunter went out but saw no *deer*, no·B; another killed a *deer*, no·Bum. A woman carried *deer*, no·B, to her mother; a hunter brought home *deer*, no·Bum. Now the woman's deer was cut in pieces and carried, a formless mass, in her back-basket; but the man carried his two deer slung whole from his shoulder. Some brothers were about to eat venison; they called, "Old man, come and eat *venison*, (no·B)." The old man replied, "You can eat that stinking *venison* (no·Bum) yourselves." The brothers saw it just as deer-meat; to the old man it was the flesh of a particular deer, one which had been killed near human habitation, fed on human offal. I have recorded two versions of the same tale, told respectively by a man and a woman. The man refers to a man's weapons and implements in the particular; the woman mentions them all as generic. The use of the word sɛm (sɛ·) is illuminating in this connection. As sɛm generic, it means *hand* or *both hands* of one person, the fingers merged in one mass; spread out the hands, and now you have delimited parts of the hand, sɛmum, *fingers*. In our use of the word army, we come near to the Wintu· conception of the generic. As an army man remarked to me, "We are stock." To particularize, we add the "suffix"—man, and now we have a particular human being, an armyman.

For the Wintu·, then, essence, or quality, is generic and found in nature; it is permanent and remains· unaffected by man. Form is imposed by man, through act of will. But the impress man makes is temporary. The Wintu· language does not reveal a passive observer, as for example, does the language of the Trobriander; yet the act of will which it reveals is limited. The Wintu· imposes his categories on matter diffidently. The deer stands out as

an individual only at the moment of his speech; as soon as he ceases speaking, the deer merges into deerness.

In his verbal phrase, the Wintu·' shows himself again humble in the face of immutable reality, but not paralyzed into inactivity. Here again he is faced with being which is, despite himself, and which he must accept without question. A limited part of this comes within his ken; his consciousness, cognition and sensation, act as a limiting and formalizing element upon the formless reality. Of this delimited part he speaks completely in terms of the bounds of his own person. He uses a stem, derived from the primary root, which means *I know*, or *this is within experience*. The definitive suffixes which he uses with this convey, in every case, the particular source of his information, or, to put it differently, the particular aspect of himself through which he has become cognizant of what he states. The material he presents has become known to him through his eyes,—"the child is playing (-bɛ·) in the sand"; or through his other senses—"this is sour (-ntɛ·)" or "he is yelling (-ntɛ·)"; or through his logic—"he is hungry (-el)"; (he must be hungry since he has had no food for two days); or through the action of logic upon the circumstantial evidence of the senses—"a doe went by with two fawns (-rɛ·: I see their tracks)"; or through his acceptance of hearsay evidence—"they fought long (-kɛ·; someone told me)." In this category of experience, the future is stated in terms of intention or desire or attempt. This is a future which depends on an act of will and is not stated with certainty. This is the aspect of experience with which the unreflective among us concern themselves exclusively; as one of my students asked: "And what is left outside?"

Outside is the reality which is beyond personal cognition, a reality which is accepted in faith. For this, the Wintu·' uses the primary form of the verb. Alone this stem forms a command; yoqu means *wash! you must wash*, the statement of an obligation imposed by the outside. With the aid of different suffixes, this stem may refer to a timeless state, as when setting given conditions for a certain activity; or to what we call the passive, when the individual does not participate as a free agent. In general, it refers to the not-experienced and not-known. To this stem is appended the non-assertive -mina, and the resulting verbal form contains, then, both positive and negative alternatives simultaneously. With the proper auxiliaries, this may either be used to negate, or to ask a question requiring a yes-or-no answer; but it can never assert the known. And when a Wintu·' gives a negative command, he uses this form again; he does not say "don't chop" but *may it remain chop not chop* (k'ɔmmina). To this not-experienced, timeless, necessary reality, the Wintu·' refers chiefly in terms of natural necessity; by means of one suffix, -lɛ·s, (a nominal form of -lɛ) he refers to a future that must be realized, to a probability which is at the same time potential, necessary and inevitable Words modified by this suffix, are translated by the Wintu·' variously with the aid of *may*, or *might*, or *would*, or *must*, or *can* or *shall*. Another reference to this reality is made with the aid of the unmodified -lɛ. This suffix can be used with personal suffixes, to indicate a future of certainty, in the realization of which the subject does not participate as a free agent. It is a future so certain, that this form, also, is sometimes translated with *must*; for example, "You, too, shall die." Without personal endings, the -lɛ ties together two events or states of being in inevitable sequence, with no reference to specific time. The sequence may be translated by the Wintu·' with the aid of the purposive *so as to*, or *to* or with *about to*, but there is no subjective purpose involved; or the word *before* may be used in the translation. Now the -lɛ refers to a suc-

cession of events in nature, and to an inevitable sequence. But here the Wintu·' can act of his own free will and decide on one of the members of the sequence. He can interpolate an act of choice and thus bring about a desired sequence. Or the subject can intercept an undesirable sequence, by changing the first unit. The same stem is used for this, but a different suffix -kɛn (second person), which the Wintu·ᵉ translates either as *so that you should not*, or *you might* or *don't*; that is, the suffix warns of the pending sequence, and implies: avoid it. For example, a man shouts to his daughter who is standing on a ladder, *Be careful, you might fall off* or *don't fall off* (talkɛn). Someone instructs two boys: sight carefully when you shoot, *so as not to miss*, or *you might miss*, or *don't miss* (manakɛn). And a woman, who hears that a rattlesnake has been seen near the water, says, "Let me not go swimming; *I might get stung* (t'optcukida)." ʙia ihkɛdi: *he might do it himself*, or *don't let him do it*, is, according to my informant, equivalent to saying, "you'd better do it yourself." So the role of the Wintu·' in the future is not creative, but can be formative, i.e. it is either negative, or takes the form of an interpolation between necessary events. Here, again the act of will exists, but appears as restrained and limited.

It is impossible to tell to what extent the reluctance to penetrate beyond external form is active in the formation of words. If the Wintu·' offers me an English word in translation for a Wintu·' one, I rarely have any way of knowing what exactly the word means to him. When he says that watca· is *to weep*, for example, is he, like me, thinking of the whole kinaesthetic activity with all its emotional implications, or is he merely concerned with the sound of keening, as I think he is? Whenever I find a group of words derived from the same root, I can clearly see that they point to a preoccupation with form alone. I find in my glossary a word for *to shave the head* (poyoqᴅɛ·luna·), for example. There is no reason to question the English rendering till I examine the root from which it is derived. I find other derivatives from this root. One means: *to pull off a scab*; another *to have a damp forehead*. If there is to be a common meaning the first is not concerned with the activity of prying off a scab, or with the sensation of the skin; it refers only to the glistening skin exposed. Neither is the second concerned with the sensation of dampness, but, again, merely with the appearance of the skin. So, though the Wintu·' uses *to shave the head* as equivalent to poyoqᴅɛ·luna·, I am concerned rather with the activity of cutting itself, with the feel of the scalp, the complete removal of hair, whereas the Wintu·' refers only to the way the end result appears to the observer; his word means *to make one's own scalp glisten*. I have recorded a word which applies to the pounding of non-brittle objects. I have translated it as *to pound to a pulp*. I have passed judgment as to what happens to the consistency of the buckeye when I pound it. But the Wintu·' is merely making a statement as to the external form of the pounded mass; from this word, ᴅira·, he derives his word for ᴅɛ·rus, *tick*. The same insistence upon outward form alone has influenced the naming of White traits. Where I say *he plays the piano*, the Wintu·' says *he makes a braying noise*. I name the autmobile after its locomotion, an essential aspect of its being. But the Wintu·' in his preoccupation with form alone, finds no incongruity in classifying the automobile with the turtle as looks like an inverted pot in motion.

Especially illustrative of this attitude are the words tɬiɒiq' and -lila, which the Wintu·' uses in situations where we would have used *make*, *create*, *manufacture*; or, more colloquially, *fix*. But these English equivalents are far from the meaning of the Wintu·' words. -lila, which I have often translated as *manufacture*, actually means *to*

turn into, to transform; that is, to change one form into another. And tlɪdɪq' does not mean *make*; it means *to work on*. Our make often implies creation, the tlɪdɪq' finds matter, assumes its presence. Make presupposes an act of aggression, the imposition of self upon matter; tlɪdɪq' also involves an act of will but one which is restrained and spends itself on the surface.

The respect for essence or quality is shown in the conception of the relationship between self and other. Two Wintu·' suffixes, which in English are rendered as coercive, reflect this attitude. One of these is -i·l or -wil, which is used to transitivize a verb, when the object is particular. For example, DɪBa· means *to cross* (a river or ridge); DɛBuwil means *to take across* (a child, beads, weapons, etc.) But the -i·l may also mean *to do with*; so that DɛBuwil may mean *to go across with*. There is the term bɛ·wil which means *to possess something particular*; but it also means *to be with*. The initiative is with the subject in both cases; but there is no act of aggression; there is a coordinate relationship. The word suki·l, applied to a chief, I have translated as *to rule*; but the word means *to stand with*. We would say, at best, that the suffix has the two meanings at the same time; but the Wintu·' makes no distinction between the two concepts, except when he has to use a language which reflects a habit of thought that regards this distinction as natural.

Another suffix which, like the -i·l, deals with the relationship of self and other, is is -ma·. This sometimes appears as a causative; for example, ba· means *to eat* and ba·ma· means *to feed*, that is, *to give to eat, to make to eat*. Bira· means *to swallow*; Bɛruma· *to fish with bait*. But like the -i·l this too implies a coordinate relationship, and one of great intimacy between self and other; for example, a chief tells his people (*with the coming of the Whites*) *you shall hunger*—bira· lebo·skɛn, *your children shall hunger*—birama·lebo·skɛn (literally *children you shall hunger in respect of*). The relatives of a pubescent girl—bałas—are referred to as bałma·s (*they were pubescent in respect of*). A man says, koyuma·da ila·m; kuya· is *to be ill*; the man says in effect *I am ill in respect to my child*. I use *in respect to* for an other which is not entirely separated from the self, and with which the self is intimately concerned. This concern may be embodied in an act directed by the self toward the other. What seems to us an act of force, is really only one aspect of the intimacy between self and other.

I have avoided advisedly the use of the term identification here. This term implies an original delimitation and separation. It is the nearest that our social scientists, starting from delimitation, can come to unity. But the Wintu·' starts with an original oneness. This is a premise underlying, not only linguistic categories, but his thought and behavior throughout. It is basic to the Wintu·' attitude toward society, for example. It explains why kinship terms are classified, not with the substantives, but with the pronouns such as *this*; why the special possives used with them, such as the nɛD, in nɛDDa·n: *my father*, are really pronouns of participation, to be used also with aspects of one's identity as, for example, my act, my intention, my future death. To us, in the words of Ralph Linton, "society has as its foundation an aggregate of individuals." For the Wintu·', the individual is a delimited part of society; it is society that is basic, not a plurality of individuals. Again, this premise of the primacy of the unpartitioned whole, gives a valid basis to beliefs such as that a man will lose his hunting luck if he goes on a hunt while his wife is menstruating. Where formal distinctions are derivative and transitory, a man is at one with his wife in a way which is difficult if not impossible for us to appreciate.

Again, the concept of the immutability of essence and the transiency of form, of the fleeting significance of delimitation, is reflected in Wintu·ɛ mythology. Matter was

always there; the creator, *He who is above*, a vague being, was really a Former. People do not *come into being* as I say in my faulty literal translation of the myths; they *grow out of the ground*; they always existed. Dawn and daylight, fire and obsidian have always been in existence, hoarded; they are finally stolen, and given a new role. In the myths, various characters *form* men out of materials which are already present; Coyote, for example, changes sticks into men. Throughout, form is shifting and relatively unimportant. The characters, Coyote, Buzzard, Grizzley-Bear, etc., are bewilderingly men and animals in their attributes, never assuming stable form. Even this semi-defined form may be changed with ease; Grosbeak is steamed faultily, for example, and turns into a grasshopper. The Wintu·' speak of these characters in English as *Coyote*, *Loon*, not *a coyote*. We have assumed that by this they mean a proper name. But it is probable that they refer to something undelimited, as we, for example distinguish between fire and a fire. These characters die and reappear in another myth without explanation. They become eventually the coyotes and grizzly-bears we know, but not through a process of generation. They represent a prototype, a genus, a quality which, however, is not rigidly differentiated from other qualities.

The premise of primacy of the whole finds expression in the Wintu·' concept of himself as originally one, not a sum of limbs or members. When I asked for a word for the body I was given the term *the whole person*. The Wintu·' does not say *my head aches*; he says *I head ache*. He does not say *my hands are hot*; he says *I hands am hot*. He does not say *my leg*, except extremely rarely and for good reason, such as that his leg has been severed from his body. The clothes he wears are part of this whole. A Wintu·' girl does not say *her dress was striped* but *she was dress striped*. Here not even the -ma· is used, to introduce the concept of partial otherness. In dealing with the whole, the various aspects referred to are generic; only when particularization is necessary as a device to distinguish toes or fingers from feet and hands is it used. But when the leg is not part of the whole, when the subject is cutting out the heart of a victim, then particularization is used, since the activity is seen from the point of view of the subject. And when a woman is ironing her dress, which is not part of her body any more, she refers to it as something separate: *my* dress.

There is further the Wintu·' premise that there is a reality beyond his paltry experience. Experience is secondary, and is imposed as form by man's consciousness, by conceptual and perceptual experience. The reality beyond this is accepted, and toward it the Wintu·' directs belief. This is the realm with which he deals in terms of luck or magic. That which he experiences and delimits can be controlled through skill or knowledge. A hunter must have both skill and luck; but skill is the more limited. An unskilled hunter who has luck, can still hit a deer by rare chance, but a skilled hunter without luck can never do so. The myths contain several examples of hunters who, having lost their luck, can never kill a deer again. Now knowledge and skill are phrased actively; but luck is phrased passively. The hunter who has lost his luck does not say *I cannot kill deer any more*, but *Deer don't want to die for me*. The natural, reached through luck, is impersonal; it cannot be known or sensed, and it is never addressed; but not so the supernatural. It can be felt or seen; it is personal. It is within experience. Such experience can be questioned and proof of it is often offered; the doctoring shaman produces as evidence the fish he has extracted from a patient, the missile of some supernatural being. Klutchie, a shaman, offers his knowledge of a coast language, as proof that, during a protracted trance of which he has no memory, he was carried by a spirit to the West Coast. But natural necessity is

beyond question, and demands no proof. It is only implied in grammatical categories; there is no name for it. The supernatural is named and can be spoken of. Toward the supernatural the Wintu·' performs acts of will. The shaman, speaking to the spirit he controls, will command and demand. But the man who dives deep into a sacred pool to seek luck, will say *May it happen that I win at gambling.* His request is passive; he does not address nature, neither does he command.

Recurring through all this is the attitude of humility and respect toward reality, toward nature and society. I cannot find an adequate English term to apply to a habit of thought which is so alien to our culture. We are aggressive toward reality. We say, This is bread; we do not say like the Wintu·' *I call this bread,* or *I feel* or *taste* or *see it to be bread.* The Wintu·' never says starkly *this is*; if he speaks of reality which is not within his own restricting experience, he does not affirm it, he only implies it. If he speaks of his experience, he does not express it as categorically true. Our attitude toward nature is colored by a desire to control and exploit. The Wintu·' relationship with nature is one of intimacy and mutual courtesy. He kills a deer only when he needs it for his livelihood, and utilizes every part of it, hoofs and marrow and hide and sinew and flesh; waste is abhorrent to him, not because he believes in the intrinsic virtue of thrift, but because the deer had died for him. A man too old to fend for himself prays:

> . . . I cannot go up to the mountains in the west to you, deer;
> I cannot kill you and bring you home. . . .
> You, water, I can never dip you up and fetch you home again . . .
> You who are wood, you wood, I cannot carry you home on my shoulder.[1]

This is not the speech of one who has plucked the fruits of nature by brute force. In conclusion, I quote an old woman, who, speaking in sorrow of the coming of the Whites, expresses the two attitudes toward nature:

> The white people never cared for land or deer or bear. When we Indians kill meat, we eat it all up. When we dig roots, we make little holes. . . . We don't chop down the trees. We only use dead wood. But the white people plow up the ground, pull up the trees, kill everything. . . . The spirit of the land hates them. They blast out trees and stir it up to its depths. They saw up the trees. That hurts them. The Indians never hurt anything. . . .[2]

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[1] D. Demetracopoulou Lee, Some Indian Texts Dealing With the Supernatural, The Review of Religion, page 407, May, (1941).

[2] Cora DuBois, Wintu Ethnography, UCPAAE 36.76.

The following papers by the present author give the detailed material on which this paper is based.

Conceptual Implications of a Primitive Language, Philosophy of Science, vol. 5, 89–102, 1938;

Some Indian Texts dealing with the Supernatural, The Review of Religion, 403–411, 1941;

Categories of the Generic and the Particular in Wintu·', AA 46.362–9.

For the classification of kinship terms, see: Kinship Terms in Wintu·' Speech, AA 42.604–6.

For words dealing with the formal rather than the kinaesthetic aspect of activity see: The Linguistic Aspect of Wintu·' Acculturation, AA 45.347–40.

The material on the relationship between self and other is in manuscript form only.

FRANZ BOAS' APPROACH TO LANGUAGE

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When trying to sum up the linguistic heritage of Franz Boas, there emerge in my memory our long conversations on the science of language. Talks or rather delightful lessons, where the great master initiated me into problems which absorbed him during the last years of his life. How he loved this science! In the autumn of 1942 a telephone call from Boas informs me that he has been ill, but feels better today and asks me to visit him.—In the afternoon?—"No, at once, later it may be worse, and I would like so much to have a linguistic talk." And in order to justify such haste he added: "It was so hard to spend ten whole days without scientific work." There is something of Marcus Aurelius in this sentence as well as in Boas' whole life.

Linguistics was often erroneously thought to play a subordinate role among his manifold activities. It is true that he came to the humanities from a quite different field; at first Boas specialized in physics and geography, and he always had to confess himself a self-made-man in "the science dealing with the mental phenomena," particularly in linguistics. The only linguist he met in his student years was Steinthal, but Boas was not yet interested in language and afterwards he regretted never to have attended the lectures of that enquiring thinker. Self-instruction can become a danger, but in Boas' case it was his great power: he remained free of the various prejudices and antiquated survivals which weighed heavily on linguistics and ethnology. He came from natural sciences with a demand for reliable and rigid method but he had no ambitions to force naturalistic habits on the humanities. On the contrary, he asserted and espoused the autonomy of humanities and just because he knew perfectly both domains —the natural and the social sciences, he never could confound them and carefully distinguished "human language, one of the most important manifestations of mental life," and cultural phenomena in general from their "biological premises." He repeatedly insisted upon the impossibility of explaining a linguistic or some other cultural structure as due to the natural environment and he confessed both his former exaggerated belief in the importance of geographical determinants with which in his youth he had started his first expedition (1883–84), and "the thorough disillusionment in regard to their significance as creative elements in cultural life," a resolute disillusionment which is already reflected in his first piece of ethnological work—The Central Eskimo (written in 1885).

It is worth mentioning, that just this trip to Baffinland definitely turned the interest of the scientist from geography to ethnology, and the leading place in his wide ethnological work belongs to linguistics. The FIRST Boas study on American Indians and his first contribution to Science (1886) was devoted to language. Curiously enough it is a "letter from Berlin": his field research with "language of the Bella-Coola in British Columbia" took place in a Berlin exhibition, to which some natives of this tribe were brought. Since then, the languages of British Columbia became a favorite field of Boas' exploration. On one of these languages, the Kwakiutl, he continually worked more than a half century, and his LAST finished manuscript, which occupied the final years and days of his life, is a comprehensive linguistic analysis of the Kwakiutl (Grammar; Dictionaries of Suffixes and Words; Texts with Translations). In the field of Indian languages it is now the most

exhaustive and in many respects exemplary description, which should be published as soon as possible.

Language was considered by Boas not only as a part of ethnological phenomena in general, but even as "one of the most instructive fields of inquiry," and his motivation is thoroughly remarkable: "The great advantage that linguistics offers in this respect," Boas tells in his magnificent introduction to the Handbook of American Indian Languages (1911), "is the fact that, on the whole, the categories which are formed always remain unconscious and that for this reason the processes which lead to their formation can be followed without the misleading and disturbing factors of secondary explanations, which are so common in ethnology. . . ."

This statement seems to us one of the most daring, most fertile and innovatory ideas ever uttered by Boas. As a matter of fact, just the unconscious character of linguistic phenomena has made and still brings so many difficulties to the theoreticians of language. Even for the great Ferd. de Saussure there was an insoluble antinomy. In his opinion every state in the life of a language is a "fortuitous state" inasmuch as "individuals are in a great degree unconscious of the language laws." Boas proceeded from exactly the same starting point: although "the fundamental ideas of language" are in constant use by a speech community, normally they do not emerge into the consciousness of its members. But the traditional doctrine has become permanently inhibited by "the unconsciousness of linguistic processes," whereas Boas (and Sapir also in this respect truly continues his way) knew how to draw the due conclusions from such premises: the individual consciousness usually does not interfere in the grammatical or phonemic pattern of language and consequently does not "give rise to secondary reasoning and to re-interpretations." The conscious individual re-interpretations of fundamental ethnic habits are capable of obscuring and complicating not only the real history of their formation, but also their formation itself. Meanwhile the formation of linguistic structures, as Boas emphasizes, can be followed and unfolds itself without these "misleading and disturbing factors." Linguistic elementary units function, without the necessity of each unit itself entering into consciousness and becoming a separate subject of unschooled thought. They can be hardly isolated one from another. And consequently this relative non-interference of the individual consciousness in language explains the rigid and imperative character of its pattern—a whole where all parts hold firmly together. The weaker the consciousness of the customary habits, the more their devices are stereotyped, standardized and uniform. Hence the clear-cut typology of the diverse linguistic structures and above all the universal unity of their fundamental principles which repeatedly impressed Boas' mind: "relational functions" presenting necessary elements of every grammar and phonemics all over the world.

Among the various ethnological phenomena the linguistic processes (or rather operations) exemplify most strikingly and plainly the logic of the unconscious. For this reason—Boas insists—"the very fact of the unconsciousness of linguistic processes helps us to gain a clearer understanding of the ethnological phenomena, a point the importance of which cannot be underrated." The place of language with regard to the other social systems and the role of linguistics for a thorough insight into the diverse ethnological patterns had never been stated so precisely. And modern linguistics will still give some suggestive lessons to the searchers in the various branches of social anthropology.

In accordance with these general views Boas endeavors "to subject the whole range of linguistic concepts to a searching analysis" and in his descriptive studies of various Indian languages he tries to seize their "inner form" and to attain the most objec-

tive, most literal and least distorting translation of their unconscious categories into the language of scientific formulations. From the start he distinctly saw the cardinal task in its double aspect: as a limited number of sounds and sound-clusters have been selected by each single language (and moreover by human language in general) from the infinitely large mass of possible sounds and sound-clusters, so the infinitely varied range of ideas have been reduced by classification in each single language (and moreover in human language in general) to a lesser number. Thus the search has to specify the bilateral "selection of material used for expression": the choice of sound features to discriminate concepts and the choice of conceptual features to be "recognized by the symbol of the same sound complex." This two-sided selection converts foreign bodies into linguistic values; it creates fixed PHONEMIC units from the sound matter and fixed SEMANTIC units from the conceptual matter.

In Boas' synthetic sketch Language written for General Anthropology (1938) there is clearly put forward the system of phonemes and grammatical devices as a necessary base of linguistic analysis. He wholly understood that the linguistic problem of the sound selection was fruitfully solved by the "phonemic principle" and he appreciated Sapir's important achievements in this matter. The necessary economy of energy forbade him in the decline of life to alter the technics of his work, but he excellently familiarized himself with this new field of research. Once, a year before his death, Boas delivered an instructive talk to some linguists on the structure of Kwakiutl. He mentioned in passing that the Kwakiutl accent is on the first syllable, if it is long, and on the second syllable, if the first is short. Since a short syllable comprises one MORA and a long syllable two MORAS, I proposed to reduce both these conditional judgments to a common denominator: the accent falls on the syllable containing the second mora of the word. Then we hearers went home under the impression that the question remained strange to Boas, but some months later in explaining to Lévi-Strauss and me another Indian prosodic pattern, "as you would say"—he suddenly added and immediately translated the accent rule in question into my combined count of moras and syllables. He wonderfully grasped and understood the language of others.

As a matter of fact, ethnology and particularly linguistics was for Boas first and foremost a means to understand the other and perceive oneself from without. Soon after Boas had entered the field of ethnology he tried to define its aims (1888): "The data of ethnology prove that not only our knowledge, but also our emotions are the result of the form of our social life and of the history of the people to whom we belong. If we desire to understand the development of human culture we must try to free ourselves of these shackles. . . . It is impossible to determine a priori those parts of our mental life that are common to mankind as a whole and those due to the culture in which we live. A knowledge of the data of ethnology enables us to attain this insight. Therefore it enables us also to view our own civilization objectively." The Copernican struggle for the scientific overcoming of the stubborn, narrow-minded, self-confident egocentrism still continues. We have come to know that our space as well as our time is only one among the innumerable varieties both of space and of time. Boas' task in the development of linguistics could be compared with the historic role of a Lobachevsky, an Einstein and other fighters against self-centered tradition. In the Introduction cited Boas opens the Discussion of Grammatical Categories with the following lucid statement: "Grammarians who have studied the languages of Europe and western Asia have developed a system of categories which we are inclined to look for in every language. It seems desirable to show here in how far the system with which

we are familiar is characteristic only of certain groups of languages, and in how far other systems may be substituted for it."

Of course, this trend in linguistics could be traced as far back as Humboldt's time. But nevertheless the "Indo-European imperialism" (as Russian linguists joke) even recently continued either deliberately or unconsciously to sway the study of "exotic" languages. And only with Boas' attacks there began a veritable change of approach. He did not content himself with declaratory slogans and with criticism of older grammars "modeled strictly on the [quasi-] Latin scheme, which obscures the characteristic psychological categories of Indian languages." Above all, he convincingly showed "that each language has a peculiar tendency to select this or that aspect of the mental image which is conveyed by the expression of the thought." Different languages differently select those aspects of experience "that must be expressed." Such "obligatory aspects are expressed by means of grammatical devices," whereas some other aspects are taken as non-obligatory and are expressed by lexical means. And each language in its own way chooses the concepts to be expressed by single simple terms or by combinations of distinct terms, by entirely heterogeneous or by related terms.

Numerous grammatical characterizations of various Indian languages by Boas and his followers still more successfully try to shake off and eliminate every linguistic prejudice, every familiar and school-acquired habit of the authors and every bent to impose categories derived from our languages upon foreign languages. Already in his earliest linguistic reflections (On Alternating Sounds, AA 1889), Boas endeavored to prove that everyone "apperceives the unknown sounds by the means of the sounds of his own language" and therefore in linguistic records we must carefully work off our usual misspellings "due to the phonetic system of our native language." The modern outlines of Russia's various languages present the closest and most valuable counterpart to these fruits of the American school. Boas saw the necessary sequel of such work in exhaustive scientific dictionaries which should with the greatest adequacy interpret the value of native words without any of the ordinary concessions to our own semantic patterns. He emphasized this problem of semantic accuracy in his last public address (before the American Ethnological Society, May 13, 1942), and he tried to embody his program in the aforementioned Kwakiutl dictionary.

Thus Indian languages came to be first scientifically treated, but the significance of Boas' linguistic investigation goes much farther. We familiarized ourselves with unfamiliar languages, we looked at them from within in order to find an objective approach to our own languages, and already this Boasian PRINCIPLE OF RELATIVITY has—in Emeneau's words—"yielded striking results when applied to the long-known, familiar material." Moreover this principle modifies our ideas not only on this or that language, but on language in general. We had learned that each language is arbitrary in its classifications, but this traditional (particularly Whitney's and Saussure's) statement is subjected by Boas to an essential restriction: indeed, the Introduction says, each language may be arbitrary, but solely "from the point of view of another language" in space or in time. In a mother-tongue whether "primitive" or "civilized" no classifications are arbitrary for its speakers. Such classifications develop "in each individual and in the whole people entirely sub-consciously" and build a kind of linguistic mythology which may direct the attention of the speaker and some mental activities of the given speech community in definite lines. So linguistic forms exert an influence not only upon poetry and beliefs, but even upon speculative thought and "scientific views, which are apparently based entirely on conscious reasoning." In itself every

grammatical pattern as much a "civilized" as a "primitive" one is in permanent conflict with logical reasoning, and nevertheless every language is at the same time "sufficiently pliable" to any terminological needs of culture and "to more generalized forms of thinking," which "give a value to new, formerly unidiomatic expressions." Civilization requires only an adaptation of vocabulary and phraseology, while grammar may remain intact.

Thus "it is not justifiable to consider languages as hindering or favoring cultural development." When a native of the far North saw a camel for the first time, he put it down as a distorted horse. Likewise we are sub-consciously inclined to take unfamiliar, remote linguistic structures as backward, defective or perverted. We are subconsciously living still in the Ptolemaic Universe and we still believe, we stand in the center of the world. "It is somewhat difficult for us to recognize that the value which we attribute to our own [form of] civilization is due to the fact that we participate in this civilization." By numerous examples Boas demonstrated, how utterly unwarranted is such an overestimation of our own linguistic habits. For instance he pointed out our first person plural as a "logical laxity" avoided by many exotic languages, where we find "the more logical distinction" between "I and you" and "I and he." And in his last published linguistic study Language and Culture (1942) Boas wittily remarked that we could read our newspapers with much greater satisfaction if in the same way as Kwakiutl our language, too, would compel them to say whether their report is based on self-experience, on inference, or on hearsay, or whether the reporter has dreamed it.

Descriptive linguistics found in Boas one of the leading representatives, but description was never for him a self-sufficient, ultimate aim. "In order to give each language its proper place," Boas requires us "to compare as well the phonetic characteristics as the characteristics of the vocabulary and those of the grammatical concepts." He truly belongs to comparative linguistics in the broadest sense of this term.

On the first anniversary of Boas' death we are fifty years from the death of William D. Whitney. Both were enabled to have their say to the end, whereas the last of the three great men lost by American linguistics, Edward Sapir, could be commemorated by the sad Kwakiutl verb wibālisEm *to perish without reaching the end.* The work of these three prominent representatives of American linguistic tradition was equally essential in descriptive as well as in comparative linguistics.

Whitney, whose ideas exercised a mighty, decisive influence over international linguistic thought was particularly praised by European scientists (as for instance Leskien, Masaryk and Saussure) for his convincing demonstration that linguistics belongs to social and not to natural sciences. Both Boas and his pupil Sapir continued to battle with the old naturalistic deviation in the science of language. One of the most tenacious survivals of the traditional naturalism was Schleicher's genealogical tree of languages, an idea or rather a myth which in spite of all criticism still pressed heavily on comparative linguistics. Boas began by embracing this tenet, and in Classification of the Languages of the North Pacific Coast, paper read at Chicago International Congress of Anthropology (1893) he taught: "The structural resemblance of the two languages [Tlingit and Haida] . . . . can be explained only by the assumption of a common origin," and although in vocabulary "the similarities are doubtful . . . nevertheless, the structural resemblance must be considered final proof." At this point Boas, contrary to Major J. W. Powell's classification of the North American languages, has even exceeded the precepts of orthodox Indo-Europeanists who derive the evidence of cognation exclusively from the MATERIAL likeness of words or morphemes. These pre-

cepts were transgressed by many observers of exotic languages, who often found an impressive STRUCTURAL similarity in their grammatical or phonemic pattern but almost without common roots and affixes. The more deeply Boas delved into indigenous linguistic life, the more clearly he saw, that side by side with DIFFERENTIATION there is INTEGRATION, another and opposite factor which works widely. This time it was ethnology,—and specially its notion of DIFFUSION,—which served as an example for linguistics.

Many significative data prevented reasoning from any striking similarity in neighboring languages to the community of their origin: evidently unrelated but contiguous languages frequently manifest a range of common features in their grammatical and phonemic structure. Grammatical and phonemic peculiarities are distributed over large continuous areas and spread over one part of some related languages (or over one part of some single language) without extending to the other part. Certain grammatical and phonemic types have a wide continuous distribution without corresponding lexical similarities. Some neighboring languages with similar phonemic features are morphologically quite distinct and vice versa. The areas of single grammatical or phonemic features do not coincide, so that one and the same language happens to be linked by different features with quite different languages.

In America Boas has discerned various vast areas, which have common grammatical or common phonemic characteristics. As early as the Introduction he envisaged the diffusion of phonetic, syntactic and even morphological traits "beyond a single linguistic stock," and the evidence seems to him "to be in favor of the existence of far-reaching influences of this kind," but he considered them "still obscure." Meanwhile convincing examples still accumulated and the fact of the frequent occurrence of morphological or phonemic assimilation between contiguous but unrelated languages became indisputable for Boas who, since his introductory paper to the International Journal of American Linguistics (1917), again and again came back to the subject. But there remained still a certain wavering in his explanation of these surprising facts. So in The Diffusion of Cultural Traits (Social Research, 1937) he appeals even to an "actual intermingling of tribes," although nearly at the same time in The Mind of Primitive Man (1938) Boas soundly stresses that "assimilation of cultures occurs everywhere without actual blood-mixture, as an effect of imitation. Proof of diffusion of cultural elements may be found everywhere. Neither differences of race nor of language are effectual barriers for their spread." Let us add, that differences of language are particularly no hindrance to the diffusion of phonemic or grammatical devices. The integration is the natural trend of linguistic intercourse and this trend naturally does not remain confined to the bounds of a single language or linguistic family.

At first Boas did not realize the full implications of his discovery He surmised that the conditions favoring such diffusion must have been much more frequent in primitive America, Africa or Oceania than in Europe or Asia. Meanwhile it was just in Europe and Asia that wide continuous areas of single phonemic as well as morphological features spreading without regard to the genetic relation of languages have been disclosed by some Old World linguists quite independently of Boas' inquiry. Then a phonemic Atlas of the world was planned, and already the first preparatives showed that concerning pivotal phonemic and grammatical features the wide continuous distribution is throughout typical of linguistic life.

Boas gradually generalized his Americanistic experience and his attitude toward the "genealogical tree" became still more critical. "The whole theory of an *Ursprache* for every group of modern languages must be held in abeyance until we can prove that

these languages go back to a single stock and that they have not originated, to a large extent, by the process of acculturation" (1920). For a long time Boas thought he was isolated in these views. Only in the last years he knew about parallel investigations in Prague, Copenhagen, Oslo and elsewhere in Europe. He came to read Trubetzkoy's Gedanken über das Indogermanenproblem in Acta Linguistica 1939. This posthumous paper brilliantly develops the following idea: "Es gibt eigentlich gar keinen zwingenden Grund zur Annahme einer einheitlichen indogermanichen Ursprache, von der die einzelnen indogermanischen Sprachzweige abstammen würden. Ebenso gut denkbar ist, dass die Vorfahren der indogermanishen Sprachzweige ursprünglich einander unähnlich waren, sich aber durch ständigen Kontakt, gegenseitige Beeinflussung und Lehnverkehr allmählich einander bedeutend genähert haben, ohne jedoch jemals mit einander ganz identisch zu werden." "It's all right," Boas told me cheerfully and heartily in returning the book. The bitterness of loneliness disappeared.

Perhaps the long inattention of the entourage to Boas' favorite idea has been partly his own fault. He often presented his discoveries as a mere criticism of current theories. News on the discovery of America would be given by Boas as a disproof of the hypothesis on a shorter way to India, while data on the new part of the world would be mentioned only casually. He fervently insisted on "limitations of comparative method," but he did not strive to make clear that in fact his outlook upon diffusion is destined first of all for enlarging the limits of historical comparison and for building up the historical geography of linguistic world. The historical research, as Boas acknowledged perfectly well, "remains equally valid, whether we assume purely genetic relationship or whether we ask ourselves whether by contact languages may exert far-reaching mutual influences" (1936).

Among linguists Boas was often held to be interested solely in synchronic study and some approved of him, others did not agree. However the searcher himself never wearied of repeating that such a study is merely a way to the history. For him every social science was in the last resort a historic science: "Anthropology deals with the history of human society" (1938) and the study of languages purposes "to unravel the history of the growth of human language" (1920). This maxim evidently carries on Whitney's tradition. In Boas' opinion the diachronic, historic approach is superimposed upon the synchronic method not only as the aim of inquiry upon its means, but likewise as the explanation upon mere description. From such a viewpoint one would scarcely understand a phenomenon without knowing, "how it came into being." And under these circumstances an exact classification of the now existing types "can only be a substitute for the genesis and history." Boas does not look for general laws beyond the historic aspect of language, as if the synchrony were but a domain of the particular and casual.

However Boas is rather disappointed by the researches on the general laws that govern and explain the historical sequences of culture and particularly the DEVELOPMENT of language: although linguistic data offer us many strikingly similar phenomena in remote parts of the world and disclose their independent origin, meanwhile any attempt to ground them on a similar, unilinear development breaks down. Quite similar structures may arise by fully unlike ways from dissimilar sources and may evolve in a multitude of divergent ways. A likeness of structures does not imply a similar line of development. And as this discrepancy became clearer, the search for evolutive laws of language (and of social life in general) seemed to Boas still less profitable and more hopeless.

Such an experience is indeed discouraging for some linguists who kept the faith that

the only conceivable laws in language are evolutive. But Boas saw that the conditions determining the course of historical happenings "are *logically* entirely *unrelated*" (1930), and on the other hand his attention was more and more attracted by "general forms" of language "that are *determined logically*" (1924). He had a clear inkling of these general devices which—either positively or negatively—underlie every linguistic pattern and which determine the typology of languages. A further step had to be made. And really in the recent development of the linguistic thought a new problem claims our attention: researches on the laws that govern and explain the STRUCTURE of languages. Such synchronic or more correctly PANCHRONIC laws are superimposed on historic linguistics: without understanding a linguistic structure as such, we would scarcely elucidate, "how it came into being".

These structural laws prove themselves to be both determinable and explainable, if they are put through an internal linguistic test. For instance the question, why most languages do not carry out the same sharp, logical distinctions in the plural as they do in the singular, was quoted by Boas (1896) as "difficult to answer." But recently Viggo Brøndal, the great Danish linguist who died on the same day as Boas, pointed out the general linguistic tendency to avoid an excessive complexity within a morphological formation: often forms which are complex in regard to one category of classification, are relatively simple in regard to another category. In accordance with this "law of compensation" plural as a grammatical number, which is more thoroughly specified than singular, usually contains a smaller and never a larger set of distinctions.

The stubborn tradition which identified the scientific explanation with the genetic approach and reduced synchronic linguistics to a mere description has influenced Boas, too; nevertheless his linguistic theory came still nearer to the fundamental problem of structural laws. And at this crucial point American linguistic thought of today and tomorrow will have to enlarge the legacy of the great teacher, the splendid heritage wherefrom generations of linguists on two continents will still draw new problems, observations and suggestive ideas.

YOKUTS STRUCTURE AND NEWMAN'S GRAMMAR

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1. General evaluation
2. Comparative material
3. Descriptive method
4. Configurational interpretation
5. Configurational interpretation and structural statement
6. Yokuts structure
7. The structure of Yokuts and of Semitic

1. General evaluation. Newman's long-awaited Yokuts grammar is* a major addition to American Indian linguistics. More than that, it is a model contribution to descriptive linguistic method and data. It is written clearly and to the point, in a manner that is aesthetically elegant as well as scientifically satisfactory. It is sufficiently detailed, more so than is usual among American Indian grammars, to enable the reader to become familiar with the language and to construct correctly his own statements about the language.[1] Phonology and morphology are treated fully; syntax is only briefly touched upon, as is customary in grammars of American Indian languages. The meanings of classes of morphemes and the translation of utterances are more careful and sensitive than is usually the case; cf. at random the meaning of the aorist suffix in §18:2, or of the non-directive gerundial -taw in §19:9. Although it is perhaps not the custom for linguists to study carefully the grammars of languages not related to their work, this is one of the few grammars which students and workers in linguistics should read with close attention to the method of handling descriptive and comparative data.

2. Comparative material. Newman's work is a simultaneous grammar of six Yokuts dialects, with most of the material coming from Yawelmani. One of the most interesting features of the book is the manner in which Newman has combined the data from the several dialects, and has based his interpretations and generalizations upon their combined weight. For every phoneme and morpheme and for every statement of their distributions, Newman gives the forms for each dialect; complicated dialectal divergences are more fully discussed, as in §22:19.

No formal attempt is made to reconstruct the common earlier form of these dialects at the time when their divergence from each other began, but Newman reconstructs particular features of that earlier common language. In addition he is occasionally able to adduce from his data evidence as to the relative date of linguistic developments, and even indications of developments which were in process at the time he obtained the data.

Some of these historical deductions are based upon the usual method of comparing features from the various related dialects. Thus, he reconstructs a bit of the morpheme stock of the earlier common language by finding cognates, including petrified forms, in the present dialects (§6:9). More frequently, he bases his reconstructions on the distribution of phonemes (§1:13), variant forms of a morpheme (§26:1, where relative dating is suggested), and morpheme classes or relations (§§18:25, 19:12, 15:25, 15:30, 18:13, 12:25) in the various dialects.

* Yokuts Language of California. By Stanley Newman. Viking Fund Publications in Anthropology 2, 247 pp. $2.50. 10 Rockfeller Plaza, New York, 1944.

[1] The only misprint which might confuse the reader is the formula CVCr instead of the correct CWCr on p. 67.

Major structural features of the earlier common language are also reconstructed from comparative evidence, in one case showing identity with the structure of the present dialects (§21:8), and in another revealing a structural feature (prefixation) which has been lost (except for one petrified morpheme) in all the dialects (§25:18).

Analogous comparative evidence—the different variants of a morpheme, each differently distributed, in the various dialects—enable Newman to say that morphological leveling has in one case occurred in the several dialects (§15:18) and is in another case under way at the present time (§7:6).

Special interest is attached to Newman's utilization of structural features of a single dialect (instead of comparative evidence from several dialects) as a basis for statements about linguistic history. In one case, he reconstructs morphemes of an early Yokuts stage on the basis of the phonemic form, distribution, and semantic function of present morphemes which he suggests have a petrified morpheme in common (-tin and -taw, §19:10). In other cases, he relates the existence of certain morphemes, which do not have the full distribution of their class, to structural features of the language: the fact that it makes no structural difference whether certain suffixes are preceded by stem or stem plus suffix has contributed to the formation of petrified stems (consisting of an original stem plus suffix, §12:3); and the fact that bi-consonantal stems plus the suffix -in, when followed by other suffixes, look exactly like tri-consonantal stems followed by those suffixes, has contributed to the formation of analogized new tri-consonantal stems consisting of the two consonants of the original bi-consonantal stem plus n as the third stem consonant (fake bases, §12:23). Finally, the distribution in one of the dialects of three extra vowels (in addition to the vowel phonemes common to all the dialects), and the fact that individuals sometimes vary between these and other vowels in a given morpheme, with younger informants rarely pronouncing the extra vowels leads Newman to say that these extra vowels may belong to a series which is in process of disappearing from the language (fn. 12).

3. Descriptive method. Modern linguistic grammars are notoriously hard to read. Although Newman's study is clearly written, one can hardly grasp the structure of Yokuts from a first reading of the book. In this case, perhaps two readings and some leafing around will suffice to give the reader a picture of the language; in many other published grammars, the reader who wishes to have a picture of the language structure has to reanalyze the whole material for himself, taking merely the elements and their distributions as reported by the author of the grammar and hardly utilizing the author's analysis. This situation arises from the fact that linguists do not yet have a complete common language. At first blush, one might think that they do. The acceptance of phonemes and morphemes as formal elements of a language description gives all linguists a fixed base to which they refer their picture of the language. This differs essentially from the situation in most other social sciences. For example, most of the academic sociological writing is not based on an explicit set of fundamental terms and does not even reveal a general agreement as to what aspects of social events are relevant, i.e. worth observing, in respect to any particular question. In psychology, most research and writing is couched in the terms of some one of the better-known theories; and material presented in one of the systems can often not be translated into another system, because not only the method of treating the data but even the selection of what variables to observe differ in the various systems. Descriptive linguistics is in a class apart, in that it has formally obtainable elements. It is this formal basis of getting phonemes and morphemes that

enabled Bloomfield to say that any two linguists must agree on the observation of linguistic data. That is to say that, differently from the case in the other sciences of human action, any two investigators of a particular language would agree on what are the relevant or significant features of the flow of speech—i.e. what features to observe in that language—and how to treat these features in setting up the elements for the description of that language.

Past this point, however, there is often no agreement, even though it might seem that agreement would be almost automatic, since all that has to be done is to state the distribution of the elements which have been obtained. If linguists differ in their arrangement of allophones into phonemes in a particular language, no confusion need result so long as the differences, or the methods used in arranging the allophones, are explicitly stated. However, when it comes to stating the relations among the elements, their distribution in respect to each other—and this is the bulk of the phonology and of the morphology—the reader of a grammar will often not understand what the author is doing, what method of arrangement he is following, and what validity his statements and interpretations have. It does not follow from this that science would profit from having all linguists use one fixed method. But it does follow that we would profit from knowing exactly what methods are being used, and what are the differences among the methods. If in reading a grammar we could state explicitly what the author is doing in every section, we would be able to make much more use of his work, of his analysis, than we usually can today.

The method used by Newman is particularly worth investigating. For it is a consistent method, more so than is usually found in grammars, and the material is meticulously arranged in terms of that method. Furthermore, in addition to the excellence of Newman's work, this grammar takes on special methodological importance as perhaps the fullest example of Sapir's mature linguistic methods. Sapir had a consistent and very productive way of handling linguistic material. The fact that he left his Navaho grammar unfinished means that we have no study which can fully reveal his methods. One of the merits of the Yokuts grammar, written when Sapir was alive and by one of his chief students, is that it follows the general lines of Sapir's work.

4. Configurational interpretation. In the paragraphs which follow, no attempt will be made to present a complete analysis of the linguistic methods used by Newman, or to note where they parallel Sapir's own work or differ from it.

The nub of the method is to describe language as a system or pattern of elements —phonemes or morphemes, depending on the level of discussion. To take the simplest case, long consonants are phonemicized as double consonants because "in each case the phonetic entity articulated as a long consonant is the configurational equivalent of two phonemes" (§1:15).

The relations between elements in the configuration are always described in terms of the pattern. Therefore Newman says: "In order to preserve that inflexible rule of Yokuts syllabic structure which does not permit the juxtaposition of two vowels, the glottal stop is interposed as a hiatus-filler between two vowels that should morphologically follow each other" (§1:13). Similarly, Newman says that a certain vowel change "serves to protect the stem-plus-suffix unit from forming a triconsonantal cluster" (which never occurs, §2:15). Since the elements are observed only as parts of the system, and occur only in the positions which are mentioned when the system is described, one can picture the configuration as determining the nature of its elements (requiring or employing them): "The strict vocalic and syllabic requirements of the base do not apply to the theme" (§12:1);

"The regular stem paradigm employs a zero suffix for the subjective case" (§24:24).

The difference between two partially similar forms is frequently described here as a process which yields one form out of the other. Thus when bases or themes have several vocalic forms, the various forms are said to be the result of vowel-change processes operating upon the base or theme (§6:2, 22:28). The difference between a base and a base-plus-suffix is described as the result of the process of suffixation (§6:1, 20:11). This is a traditional manner of speaking, especially in American Indian grammar (e.g. in the Handbook edited by Boas). It has, of course, nothing to do with historical change or process through time: it is merely process through the configuration, moving from one to another or larger part of the pattern. Although, as will be seen below, such terms are less used today, they fit in very well with the method used by Newman, because this method is in general modelled on moving systems. In several places, the model is that of a living organism: "When morphological operations call for a triconsonantal cluster medially, protection may be afforded by the insertion of the protective vowel after the stem, or by the truncation of the initial suffix consonant" (§3:4); "In its typical morphological behavior Yokuts adds a suffix to a stem which has undergone dynamic vowel processes" (§6:1). Once, it is a solar system model: "Each of the base types at one time moved, more or less, in its own unique orbit" (§7:4).

The configuration is treated as though it were a pattern of meanings as well as, basically, of forms. Summaries are offered of the meanings of various formal parts of the pattern. Thus Newman makes the following neat analysis of final as against thematizing (the major type of non-final) suffixes: "Some general functional differences characterize these two formal types of suffix. Final suffixes include a) all tense suffixes, whether their tense reference is pure, as in Wikchamni -si, aorist (past or present tense), or mixed, as in Yawelmani -'at, durative passive aorist; b) all suffixes of mode; c) all gerundial suffixes; d) all the case suffixes of the noun. Thematizing suffixes include a) all suffixes of modal derivation; b) all suffixes referring purely to voice or c) purely to aspect; d) all nominalizing suffixes; e) all verbalizing suffixes" (§6:7). In this passage he has correlated a difference in meaning with the difference in position of the two suffix classes. In other cases Newman also points out partial similarities as well as differences in meaning of different forms: "Suffixes whose function is purely that of defining voice are thematizing in type. But suffixes which express a mixed voice and tense or voice and gerundial function are of the final type, as Yawelmani -it, passive aorist, or -tin, passive gerundial" (§14:1). "Modal functions, referring to an attitude or affective disposition with regard to an activity, are primarily expressed in Yokuts by means of particles. In addition to this formally loose means of conveying notions of modality, there are only a few suffixes of a modal character. But these are to be distinguished into two groups. On the one hand, a set of modal ideas of a comparatively external and casual nature, such as the desiderative ('desire to act upon, try to act upon'), the hortatory or prioritive ('must act upon, act upon . . . before doing anything else'), and the exclusive ('do nothing else but act upon'), is conveyed by thematizing suffixes; for convenience of reference, these elements are classed as suffixes of modal derivation. In contrast, the category of mode proper, including such concepts as the imperative, the dubitative, and the precative, is expressed by final suffixes" (§16:1). The search for elements of similar meaning, i.e. the attempt to make exact statements of the patterned meanings, leads Newman to find identities between suffixes different in form and position: "A number of factors make the distribution of causative suffixes one of the most ramified formal pictures of a single semantic function

in the language. In the formation of the causative, morphological cleavages are characterized, not only by the variable of suffix form (e.g., Yawelmani -a·la/ for bases I, Yawelmani -e / for bases II), but also by the variable of stem form (e.g., Cukchansi -e/ with the long causative stem of base IIA1 but with the strong stem of bases IIA2 and IIB). Not infrequently two causative processes overlap in their affiliations, offering optional methods of forming the causative" (§14:41). Note that there is a formal relation among all these causative suffixes: either they are complementary to each other in that they occur with different bases, or else they vary relatively freely with each other if they occur with the same base.

Largely as a result of the attempt to find meaning patterns, this method puts forms into classes which are given meaning names. The morphemes put into such a class will of necessity have some formal features in common; but they may also differ from each other in some relevant formal features. Thus, Newman sets up a class of gerundials: "The term 'gerundial' is applied to verbal derivatives whose predication is subordinate to that of the main verb. Syntactically, gerundials cannot take a grammatical subject; the agent of a gerundial activity is either appropriated from the main verb or expressed in the possessive case. But these semantic and syntactic characteristics belong to verbal nouns as well as to gerundials. The two types of subordinates, however, are sharply distinguished in morphology: verbal nouns, like all nouns of Yokuts, must appear with one of the six case endings (subjective, objective, indirect objective, possessive, ablative, locative); gerundials, on the other hand, are true verbs in that they cannot take any of the case endings" (§19:1). Certain of the gerundials, however, differ from the others in their grammatical position and cut across classes which have been previously set up: "The agent of the gerundial activity (expressed by -taw) appears in the possessive case. Although this syntactic treatment is characteristic of passives, the suffix -taw is clearly not passive, for it takes its own grammatical object when used with active stems, and it may, in addition, be attached to medio-passive stems; genuinely passive suffixes cannot, of course, be added to stems which are already passive or medio-passive in voice" (§19:9). "The agent of this gerundial activity (expressed by -'as) is indicated by the possessive case, a syntactic feature which marks the precative gerundial as a non-finite verb. But in spite of its non-finite character, this verb may stand alone without the support of an independent, finite verb in the sentence; Yawelmani xat'asnim is acceptable as a complete predication. No other gerundial has been found to assume the force of a complete, independent predication" (§19:11).

The attempt to establish a basic pattern leads to important generalizations about the total structure of the language. "Each morphological process of Yokuts is accompanied by stem changes. In contrast to the root consonants, which are the inflexible, unchanging phonological units of Yokuts, the root vowels undergo a variety of changes in assuming their stem form. The extensive system of vocalic change can be conceived as operating on two planes: on the one hand, dynamic vowel processes effect ablaut changes which are not to be explained in terms of mechanical phonetic conditions; on the other hand, a number of phonetic processes introduce additional vowel changes of a purely mechanical nature. In the formation of stems these two planes interact; a stem which has suffered dynamic changes may, in turn, be subjected to secondary phonetic changes" (§2:8). "A thematic verb root (i.e. base plus suffix) may be built upon the stem of another theme as well as upon the stem of a base; i.e. the root of a given thematic verb may be not only secondary in its base derivation, but tertiary or even quaternary in the strict numerical sense. Theoretically, there is no limit to

the number of thematic layers that can lead up to a theme. The practice of avoiding formal elaboration of any kind in Yokuts, however, sets a vaguely defined but comparatively narrow limit to thematic luxuriance" (§12:1).

The interest in configuration makes it particularly easy to recognize the status of an element (phoneme or morpheme, or "process"—i.e. inter-element relation) in respect to the other elements. Thus, after showing that morphemes ending in vowels have a glottal stop after the vowel when they are final, Newman says "If the Yokuts glottal stop was ever an organic consonant in final position, it has been reinterpreted and leveled to the status of a protective, inorganic element wherever it occurred finally" (§1:13). Productive features are always noted as such (§15:30, 25:1). As a result of this we often get very useful observations: After noting that continuative suffixes are not productive, Newman adds "The lack of vitality (of this suffix category) is indicated by the limited and sporadic application of the processes involved and by the specializations of meaning that frequently emerge: e.g. Yawelmani 'work' as the continuative of 'grasp', Gashowu 'wait on table' as the continuative of 'pour'. Such semantic specialization, while it represents the normal practice in English, is exceptional and anomalous in Yokuts" (§15:30). And since a configurational feature is presumed to operate upon all elements in its sphere, any lack of that feature in a form where it is to be expected, i.e. any exception, leads the linguist to search for an independent interfering pattern: The addition of vowel suffixes is accompanied by the dropping of the preceding vowel, e.g. the i of hɔ·yin *get sent.* This does not happen in forms like panwix *bring.* Newman states it: "A zeroing of the last vowel in the prevocalic normal stem of the IIAb theme would result in a triliteral cluster, which is prohibited in Yokuts. The resistance of this vowel to a zero-grade reduction is undoubtedly due to syllabic interference, for identical morphological processes create verbal themes of type hɔ·yin and panwixa" (§12:13).

Finally, the configurational interpretation offers hints of past or current changes in the language, since historical changes are undoubtedly determined in part by the structure of the language at the time: "The form of the future suffix differs considerably among the dialects. Undoubtedly the set of future suffixes in modern Yokuts represents, on the one hand, a deposit of several distinct historical sets and, on the other, a phonetic differentiation between suffixes of an originally uniform set. The process of differentiation is the more apparent, for a suffix containing the consonant n or 'n, generally with a vowel of the i series, is the most widely distributed future suffix in Yokuts. However, the particular details of the historical process have been obliterated by a regimentation of future suffixes into a firmly integrated pattern" (§18:11). "The statistical rarity of base IB is due to its anomalous position in the configuration of bases. Because it is the only base ending in a strong vowel, base IB often requires special phonetic treatment in some of the stem formations and special truncated suffixes. Special morphological processes frequently set this base off from the other bases. Among the nouns of theme type IB, corresponding in form to the reduced stem of base IB, the dialects have developed a bewildering variety of sub-classifications and special phonetic processes in their attempt to reinterpret this formal unit to a satisfactory configurational status. By a wide margin, in short, base IB is configurationally the most isolated and behavioristically the most aberrant, formal unit in Yokuts. In view of this, it is hardly surprising that base IB is being leveled out of existence" (fn. 34).

5. Configurational interpretation and structural statement. The method described above differs in several inessential

respects from the type of descriptive analysis which is more widely used today. It may be of interest to note some of these differences.

The great attention to meaning evident in Newman's work is not common in modern grammars. In this Newman's work is undoubtedly superior. Nevertheless, it may be argued that the different grammatical statuses should be kept apart rigorously and clearly: the configuration is always one of linguistic forms, and the meanings are always external statements about forms or groups of forms. The technique of arranging a grammar in two independent ways, in terms of form and of meaning, which Jespersen tried to work out in his Philosophy of Grammar, is apparently not attempted today by any linguist. It is impossible to carry out in any explicit or objectively agreed upon way because it is impossible to divide meanings into elements of meaning, to compare one meaning with another, or in general to work out a structure of meanings. Sapir never patterned his linguistic material by meaning, nor does Newman. Newman does, however, note similarities of meaning in some cases even where there are no similarities of form. Thus he notes that certain non-final suffixes (desiderative, hortatory, etc.) are modal as are also certain final suffixes (imperative, precative, etc.). He lists the first group as suffixes of modal derivation (ch. 16) and the other group as modal suffixes (ch. 17). There is of course no harm in pointing out their similarity of meaning and in assigning them similar names. However, it must be recognized that these similarities exist primarily for people in the grammatical tradition of the western world. There is apparently no basis for finding any connection between the two groups in terms of Yokuts language or Yokuts speakers. To the extent that every grammar is a transference from the described language to the language in which the description is written, Newman's technique is of course necessary. If, however, we seek to describe a language in a way that is maximally independent of the language, culture, or experience of the describing linguist, we would recognize no meaning similarities except where there are formal similarities. This formal basis for meaning statements could suffice even to bring out niceties such as are pointed out by Newman.

Somewhat related to the question of meaning is the grouping of elements into classes which are given formal names (e.g. IA2) or meaning names (e.g. gerundial). Sometimes such classes are set up on the basis of one criterion and do not correlate with any other formal criterion (but only with meaning features). For example, Newman gives a list showing the relative order of various classes of suffixes:

I. Thematizing suffixes
  A. Affiliated with the base systems
  B. Affiliated with the theme systems
    1. Verb-forming suffixes
    2. Noun-forming suffixes
II. Auxiliary suffixes
III. Final suffixes

What may not be clear to the reader is that these are not classes of suffixes which are differentiated on various grounds and which also are restricted to the above order. Rather, this relative order is the chief criterion for classifying the suffixes as they are above. Group I is the list above consist merely of those suffixes which do not occur finally. Group IB is defined on the basis of the fact that its members occur both after bases and after other suffixes. There is therefore no new information in saying that group IB occurs after group IA. On the other hand, there are two cases of formal correlation in the list above. About noun forming suffixes, which are defined by the fact that the case endings follow them, this list gives the added information that they occur after but not before verb forming suffixes. And about the auxiliaries, which are defined by features of stress and vowel harmony, this list gives the added fact that they occur after the thematizing suffixes.

It is desirable that the correlation between form and form (e.g. the two facts about noun forming suffixes) should be distinguished from statements which contain only one fact and do not correlate it with any other.

In general, the technique of classification and naming can be replaced by the technique of stating relations. Thus, Newman calls a base plus non-final suffix a theme, and obtains classes of themes according to the non-final suffix which went into making them. We could just as well speak in terms of base- and base-plus-suffix, and avoid the term "theme." We can similarly side-step the stem-classes of bases and themes. For the base-stems are merely various changes in the vowels of the base (e.g. the zero stem eliminates the second base vowel, yielding the stem hiby- from the base *hibe·y *bring water*); most of them affect only the final vowel of the base, but some also change the first vowel. The theme stems are similar except that they only affect the final vowel of the theme (i.e. of the suffix which had been added to the base).

Whenever a suffix is added to a base or a theme (base plus suffix), vowel changes occur in the base or in the last suffix before the new addition; these vowel changes are called the stem. Each suffix is associated with a particular vowel change or stem, so that when it is added to any base, or to any base having a given phonemic structure, that particular vowel change takes place. When a suffix is added after another suffix (i.e. onto a theme) the vowel changes that take place in the preceding suffix (i.e. in the theme) are generally similar to the vowel changes which occur in a base when that suffix is added to a base. Newman recognizes a long series of stems, and notes for each stem what suffixes go with it. We could just as well avoid the term "stem" as a morphological factor and as a classifier of suffixes: all we need say is that each suffix consists of certain phonemes preceded by a vowel change; in some cases this vowel change varies slightly according to the phonemic structure of the base preceding the suffix, or according to the phonemic structure of a prior suffix. Instead of talking about bases and themes, stems and classes of suffixes (classed by the stems), we now talk about bases and suffixes only. This is not to say of course, that one of these ways of talking is superior to the other. They are only ways of talking, and each may be useful for particular purposes. If when we use the method of distinguishing various classes and types of elements—themes, stems, etc.—we find that many similarities remain among them, e.g. the similarities between base and theme in respect to their stems (vowel changes), then we may prefer to use the latter method which would not put base and theme under different names, but would distinguish between them only where necessary.

Another term that is disappearing today, no doubt under the influence of Bloomfield's Language, is "process." There is involved here a method, not merely a term. Newman uses "process" to indicate a relation between two forms one of which may be viewed as consisting of the other plus some change or addition. Thus, the addition of suffixes to a base is a process, as is the assimilation of a pre-glottal-stop vowel to the quality of the vowel after the glottal stop (§2:18), and the changing of vowels in the base when suffixes are added. All such cases can be viewed differently, without bringing in the time or motion analogy implicit in "process." Instead of talking about the word ċumo·-'uy *that which was devoured* and ċuma·-'an (*he*) *is devouring* as the resultants of adding the suffix 'uy and 'an to the base *ċo·mu, we can say that the two words contain each the morpheme ċo·mu and respectively the suffixes 'uy and 'an, each suffix containing a vowel change. We now have not a process from base to word via suffixation, but an inventory of the elements (morphemes) present in two utterances. We can then rearrange this inventory by listing all the utterances in which a given

morpheme occurs. The same information that was previously given in terms of a process, from base to word, is now given in terms of a catalog of the components of words. Some of these component parts are bases and others are suffixes, but that does not mean that the bases underlie the word more than do the suffixes, nor that the suffixes are added to the bases rather than bases being added to suffixes; it merely means that some morphemes are initial and non-final (bases), some are non-initial (suffixes).

Similarly, if we speak of the assimilation of o· to a· before 'an we have a process yielding ćuma·-'an. But we speak in morphophonemic terms and say that all vowel morphophonemes before 'a have the phonetic quality a: we then write morphophonemically ćumo·-'an and pronounce ćuma·-'an. Or we can speak in terms of morphemes and say that all initial morphemes ending in the phonemes e· and ɔ· have complementary variants ending in a· which occur only before non-initial morphemes beginning with 'a. Finally, we can speak of all suffixes which begin with 'a as beginning really with $\bar{}$'a, where $\bar{V}$ = a (i.e. $\bar{}$ is a supra-segmental morphophoneme which changes the quality of the vowel under it to a). All four descriptions above are, of course, equivalent. In the last three we avoid implying the primacy of the base over the vowel umlauting. Instead of a process or change, they give us a number of elements, morphophonemes or morphemes, so defined that when these elements occur next to each other their phonemic forms are what we actually hear.

Lastly, we consider the Dynamic Vowel Processes, in which each vowel of a base is shown to change in various ways as suffixes are added; each stem is obtained by applying a vowel process to each vowel of the base (or theme). Newman gives a complete table of these on p. 23–4 which greatly simplifies the description of the vowel changes (stems) associated with each suffix. From a general structural point of view we may note that all these processes are composed of a few changes: the adding of a mora or the dropping of the second or all moras (a > a·, a > zero, a· > a, a· > zero); the change of i > e, u > ɔ (morphophonemically written o; these occur chiefly before · but not always), a or ɔ > i, i or u > a; the addition of ' before or after the first mora. Since each of these changes occurs only when particular suffixes occur, we can consider them as part of the suffixes, so that the dubitative suffix is not al but $\bar{}$al, where $\bar{V}$ = zero (i.e. *giyi *touch* plus a suffix beginning with $\bar{}$ has the phonemic form giẏ). Here again we no longer talk about process and change or the priority of the base; were merely note the adjacent occurrence of initial morphemes (bases) and non-initial morphemes (suffixes). We may say that the suffixes begin with an element whose phonetic value extends over the last preceding vowel (or both vowels of the preceding morpheme). Or we may say that the suffix begins with a non-phonetic morphophonemic symbol, and that the preceding morpheme has complementary phonemic forms each of which occurs before particular morphophohemic symbols.

Both Newman's method and the alternative methods indicated above are essentially similar in that they describe particular events or relations in terms of general systemic relations. This was indeed the great contribution of Sapir's talking about configuration and pattern. The type of model Sapir and Newman used pictured the particular relation as supporting or being controlled by the general relation. Thus Newman can say that in pilaw *in the road* there has been added to the morpheme pil- *road* and -w *in* a protective vowel in order to preserve the general pattern of not more than one consonant finally (§22:3). Today, the tendency is to use as model the deductive system of scientific description, so that we might say that no final clusters occur and deduce from that that when the morpheme pil- occurs before the morpheme

-w it has a phonemic form ending in a vowel. A protective form protects a general pattern; a deduced form is a special case of a general statement, which statement would not have been true if the actually occurring forms had not fitted in with it.

The deductive style of talking constantly seeks the most general statements which are valid for all the material surveyed. Once a statement has been made, it is not necessary (though it may be helpful) to repeat it for each actually occurring case; this is one of the reasons for the disuse of repetitive paradigms in modern grammars. It is important to ask if this description in terms of a catalog of elements and a minimum of most general statements about their occurrence may not miss much of the heuristic value of Sapir's way of working, with its intuitive insights and utilization of signposts. The answer is that the particular methods characteristic of Sapir and of Newman's work are essentially aids in the process of research. Each worker will use whatever models and habits of thinking come most naturally to him. The productiveness and elegance of Sapir's and Newman's method is apparent from their work, and many, in our culture perhaps most, workers will profit from these techniques. However, once an intuitive guess has been checked, it is no longer intuitive but an observed fact; and the explicit search for most general statements parallels intuitive pattern-thinking in finding interfering factors, inorganic status of particular elements, etc.

6. Yokuts structure. Newman's findings will be summarized here because of the interest both of Newman's analysis and of the grammatical system of Yokuts. As a test case of the differences in method discussed above, the method used in this summary will upon occasion differ from Newman's.

The rather large stock of phonemes is given by Newman on p. 13 and 19–20. Only two points in the phonemic system seem to be of special interest: the glottal stop, and the interrelation of the vowels.

There are 12 glottalized phonemes and a glottal stop. The glottalized phonemes configurate as single phonemes, although they pair with every other phoneme except the non-aspirate stops and affricates and the voiceless continuants.[2] The ' is automatic in certain positions (§1:13) and has special vowel changes before it (§1:12, 2:18, 2:22, 3:3). Certain suffixes begin with a "floating glottal stop," i.e. if a voiced continuant precedes them it is glottalized; otherwise the suffix merely begins with a segmental ' (§1:8). Finally, the glottalized voiced continuants do not occur after a consonant. This leads to morphophonemic alternants: e.g. the tribe name čoẏniṁni' is čoẏeṅmaṅi in the plural (§1:17). We can describe the last two facts by saying that the ' is addable to and removable from glottalized continuants. It would therefore be desirable to consider the glottalization as separate element. And since a glottalized consonant configurates as one consonant, we must consider glottalization as a supra-segmental phoneme which can occur simultaneously with most of the segmental phonemes. In some positions it occurs between phonemes, and is then a segmental glottal stop. If we make an exact statement for the occurrence of this supra-segmental phoneme, and for the limitations of the phonemes in its neighborhood, we would include the fact that it operates only on the first of any two successive consonants; i.e. it may occur over a whole cluster but can have phonetic effect only on the first part. Then we may write čoẏṅiṁṅi' and čoẏeṅṁaṅi without requiring alternants of the root, and pronounce as above.

[2] I.e. there is g, k, ḳ, z, c, ć, m, ṁ, etc. The phonetic values of the phonemes are so evenly patterned that one could say that there are 4 stops and 2 affricates, to which voicing or glottalization may be added; 3 nasals and 3 voiced continuants, to which glottalization may be added; 3 voiceless continuants, and h and '.

A more involved case is that of the vowel harmony. Of the ten common Yokuts vowel phonemes, Newman shows that four, a, ɔ, i, u, are basic; only these and their lengthened forms (a·, ɔ·, e·, o·) occur in bases. Three chief cases of vowel harmony or assimilation connect a with ɔ, i with u (and their respective lengthened forms). First: Almost all suffixes contain only the vowels a and i. When suffixes containing a come after a stem whose last vowel is ɔ, they have ɔ instead of a; and when suffixes containing i occur after stems whose last vowel is u, they have u instead of i (§2:5–6).[3] Thus the agentive is hine· in ṭun-haṅ-hine· *the door which is being closed*, but huno· in ṭun-huno· *one who is closing the door*. Second: Before certain suffixes the last vowel of the base changes to i, if it is a or ɔ, but remains unchanged if it is u; and before other suffixes the last vowel of the base changes to a if it is i or u, but remains unchanged if it is ɔ (§2:11, 8:21–4, 10:19, 11:7–17). Thus before the future zero suffix, *bo·huṭ *mature* has the form buh'aṭ', and *čɛ·niš *sweep* the form čin'aš, but *ṣɔ·wɔn *swell up* has the form ṣɔw'ɔn without change of vowel. Third: Before a consonantal suffix, noun themes have special forms ending in i or a. However, among nouns adding i, if the last vowel of the theme is u, the added i is replaced by u; and among the nouns adding a, the added vowel is replaced by ɔ if the last vowel of the theme is ɔ (§22:4–9, 24:22). Thus we have (added vowel in parentheses):

wɔdɔ·diṣ (a)	*heel*
'oy'uy (a)	*chaparral cock*
šama' (a)	*mouth*
nɔh'ɔ' (ɔ)	*bear*
ǩɔčɔ'yi' (i)	*rat*
ho'su' (u)	*cayote*
ṭ'ayṭ'ay (i)	*bluejay*
šɔhgɔy (i)	*elk*

If we now consider what is common to these three cases, we find that a does not follow (or, in the second case, replace) ɔ, nor does i follow u. Articulatorily, we may say that a is the low front vowel, ɔ low back, i high front, u high back. Then if a vowel is followed (or, in the second case, replaced) by one of the same height, the second vowel must also be of the same mouth position: the second will not differ from the first in position alone.[4] This may be expressed more simply if we actually break each vowel up into two supra-segmental components, mouth position and height, and say that the position component of the first vowel extends over the second if the second has the same height component as the first. All the limitations mentioned above then become special cases of this one limitation.

We now consider the general limitations upon the sequences of phonemes that make up an utterance. Newman describes this in terms of two syllabic structures, CV and CVC, which occur in certain sequences. The statements he makes in ch. 3 may be summarized directly in terms of the utterance, without reference to syllables, by some formula such as the following (· is length; # utterance juncture; items in parentheses may or may not occur in that position; items written above each other are mutually exclusive; and the section in square brackets can be omitted or repeated without theoretical limit):

$$\#\,C[V(\underline{C})C]V(C)\,\#$$

Thus we have ki *this* (such short words are rare), ho·graw *directly*, biwi·nelse·nit *from one who is made to sew*.

Stress (ch. 4) is not phonemically marked, being automatic in respect to word or phrase juncture. Newman shows that many words (especially pronouns, particles, etc.) lose their stress when they are not phrase-final. In rapid speech, several words may be grouped together with only the last one stressed. Yokuts therefore really has a phrase stress rather than a word stress; the

[3] If the suffix vowels are a-i or i-a only the first harmonizes.

[4] But if the second vowel is of a different height it may be of either mouth position.

effect of a word stress is given merely by the fact that verbs and nouns, the main word types in Yokuts, usually occur in phrase-final and hence usually have the stress.

Before we go on to the morphology of Yokuts, it will be useful to note what morphemes have more than one phonemic form (or: what different phonemic sequence we choose to consider as different forms of one morpheme). It appears that very many Yokuts morphemes have more than one phonemic form within one dialect, each form occurring in different environments and hence being complementary to the others. Some of these variant forms result from automatic morphophonemic alternations, i.e. are determined by the phonemic environment. The greatest group of these is connected with the restriction on what phoneme sequences occur in an utterance. The formula above shows that no Yokuts utterance contains sequences CCC, VV, CC#, V·C#[5], #V, etc. It often happens that when one morpheme occurs next to another, the sum of their two phonemic sequences would yield a sequence not described by the formula above, i.e. containing some sequence which cannot be derived from the formula. To take a simple case, we have a morpheme xaya· *place* which occurs with the suffix -ši' in xaya·-ši' *he placed it.* When this morpheme occurs before the suffix -t we would seem to obtain the sequence V·C# which is not included in the formula. In all such cases we find that the morpheme in question has a variant form which occurs in the environment in question such that the variant form plus the environments do not yield a sequence which is excluded from the formula. In our case above, the word is xaya-t *he was placed,* and the original morpheme is not xaya· but xaya·/xaya, the latter form occurring before C#. Every morpheme then has variant forms which occur in such environments that no sequence of morphemes yields a sequence of phonemes not included in the formula. This fact is what makes the formula correct, and is equivalent to Newman's protective features.

In general, the many alternations which fall under the statement above are determined by the phonemic environment: e.g. CVCV· morphemes have variant CVCV before C# suffixes. In the case of the extra last vowel which noun stems have before consonantal suffixes (§22:3), we find that some stems have a (ɔ), others i (u). There is no way of predicting which stem will have which vowel height. The only way we can treat this as an automatic alternation is to say not that the stem adds a vowel (but which vowel?) before consonantal suffixes, but that it drops a vowel (whichever it has) before vocalic suffixes. This means that the high or low vowel will have to be considered as part of the stem.[6]

There are other automatic variations not connected with the statement above. If the facts about vowel harmony and limitations in the neighborhood of ' are not expressed in terms of surpa-segmental components, we must state them here, by saying, for example, that all suffixes whose first vowel is i have variant forms with u which occur only after morphemes whose last vowel is u.

Many morpheme variations in Yokuts do not depend on the phonemic environment. I. e. certain morphemes have two or more forms, each of which is used in the neighborhood of certain other morphemes (not phonemes). Thus all the morphemes containing u have forms with ɔ instead of u in most (but not all) of the cases when · follows the u; this ɔ· is phonemically identical with the ɔ· in morphemes which have ɔ as their short vowel. Morphophonemically, Newman writes o· for the ɔ· which varies with u (§2:2, 11).

Most of the morpheme variations which

[5] A few exceptions are given by Newman in fn. 22.

[6] We cannot consider the vowel as the first part of the suffix, because each suffix occurs after both i and a last vowels, while each stem occurs with only one of them.

depend upon a morphemic rather than phonemic environment are to be found in the suffixes. Thus, the Yawelmani dialect has a consequent auxiliary suffix which has the form e·xɔ· after suffixes (including reduplication), but 'e·xɔ· with floating ' after initial morphemes (§15:18). The future suffix has one form (Yawelmani ') after ·, another (Yaw. en) otherwise (§18:12). Particularly complicated are the environments in which the variant forms of the causative (§7:4–7, 14:13–4) and objective (§23:3) occur, described by Newman under cleavage of the base types. In this category of morpheme variation we must also include the repetitive suffix. Newman shows that reduplication (ch. 11) occurs only in bases having two consonants, and has the meaning of repetition (giẏgiẏ *touch repeatedly*), while the repetitive suffix -da· never occurs after these bases and has the same meaning. It is therefore possible to consider -da· and reduplication, in spite of their difference in form, as variants of one morpheme.

As a last example of morpheme variation we may note the possibility of two interpretations of the plural morpheme. In Yokuts there is a morpheme of generally plural meaning consisting of vowel change (in the base) plus i before a zero subjective case ending, and vowel change plus h before the other (non-zero) case endings. We may consider the i to be part of the plural morpheme, with the subjective case after it marked by zero, because in the singular the subjective case is marked by zero. On the other hand, we may say, as does Newman implicitly, that the subject case has two variants: zero after the singular but i after the plural, and the plural has two variants: vowel change plus h before the oblique case and just vowel change alone before the subjective case. The i can be assigned to either but not both of the adjacent morphemes, plural and subjective.

Knowing in what way morphemes vary in Yokuts, we can now consider what is the stock of Yokuts morphemes. In several cases we find that morphemes which occur in particular positions also have particular types of phonemic form. Some morphemes occur by themselves in a word, without following suffixes; these are adverbial particles, interjections, etc. (ch. 27). Others have a special unproductive system of suffixes, rather different from the others; these are for the most part pronouns, interrogatives, etc. (ch. 26). All morphemes which occur initially in the word and which do not occur finally (i.e. never constitute a word by themselves) have the following form: 2 or 3 consonants for the odd-numbered phonemes, 1 vowel quality which occurs in the first two even-numbered phoneme places, and zero or 1 length which occurs in either of the even numbered places. The combinations deducible from this statement give 6 possible sequences (CVCV, CV·CVC, etc.) listed by Newman in §7:1, but the statement above suffices to indicate just what phonemic material is needed to identify any initial morpheme uniquely. When we say CV·CVC we have to specify that the two vowels are idenical (the V· being the lengthened form of the V) and that not both vowels can be lengthened. Such limitations are summarized in the statement above. Each of these initial morphemes has a specific meaning, neither verbal nor nominal, e.g. *'a·mal 'help' (§13:9).

In addition to these, there are other morphemes which are never initial. Some of these are always final, the others never. Of those that are never final, certain ones (called auxiliaries) do not have vowel harmony with the preceding morpheme, and the stress of the preceding morpheme is placed as though the auxiliary were a separate word (§6:30, ch. 15). Another, wiyi, occurs with special initial proclitic morphemes (instead of the usual bases) and with particular suffixes after it; it is celerative in meaning and informal in style (ch. 10, §15:4). All other non-initial morphemes, both final and non-final (except

nominalizing suffixes), occur in general with any initial morpheme at all, have the vowel harmony variants, and are part of the stress unit (the stress is on the penult vowel of the word or word-phrase, including these suffixes in the word). Some of these non-final suffixes occur only after initial morphemes; the majority, however, occur after initial morphemes or other suffixes. A few final suffixes, called case-endings, occur only with any one of a group of non-final suffixes, called nominalizing. And the nominalizing suffixes always have a case suffix after them. Most nominalizing suffixes occur only after particular initial morphemes. Among the non-final suffixes in a word, the nominalizing are always last. Auxiliaries may occur after non-final non-nominalizing suffixes.

With each suffix is associated a modification of the vowels of the preceding initial morpheme (addition or dropping of moras, limited changes in quality, addition of '). Each suffix occurs with only one particular vowel change (base plus vowel change is called stem in this grammar), but each vowel change occurs with one or more suffixes. There is no reason to consider these vowel changes as separate morphemes, since no meaning is in general assignable to them; furthermore they are limited in that any given suffix occurs with only one of them. The vowel changes could be considered as classifiers of suffixes, but that does not mean very much; classes of suffixes formed according to like vowel changes would correlate with nothing else, and it is not useful to set up classes that do not tie in with some other feature. It seems best therefore simply to consider the vowel changes as being part of the suffixes. There is no particular reason why morphemes should consist of whole phonemes. All that morphemics requires of phonemics is that it should be possible to identify each morpheme phonemically. A dropping or a change of phoneme is as good as a phoneme in constituting a morpheme. The suffixes therefore merely begin with phonemic vowel change, i.e. with components which change the preceding vowel phonemes, and then continue with ordinary phonemes. We can say that the causative is a·la· and is added only to the W + Z stem of the base: base *giẏi *touch* plus stem change W + Z yields giẏ- plus suffix a·la· yields giẏa·la·-. But we can also say that the causative is $\bar{V}$a·la·, where $\bar{V}$ = zero: *giẏi + $\bar{V}$a·la·- = giẏa·la·-.

There are some special cases. In the noun there is an absolutive form (marked by a vowel-change) which occurs only before the zero subjective case-ending, and an oblique form which occurs before all the other case-endings. Following the method used above, we consider the absolutive vowel change to be part of the subjective case ending; and since the suffixed part of the subjective case is zero we find that the vowel change is itself the subjective case morpheme. The oblique vowel change could be considered to be merely the first part of each oblique case-ending. But since it is common to a group of suffixes which have some relevant meaning in common, it would be more useful to consider it as a morpheme in itself, having general oblique meaning in contrast to the subjective-absolutive morpheme and occurring only before specific oblique cases; the oblique case morphemes, which only occur after this oblique morpheme, would then indicate specific meanings over and above the general oblique meaning.

Similarly, in the noun plural, we may have plural absolutive and oblique general morphemes (vowel changes plus i and h respectively), the latter occurring only before the same specific oblique case morphemes mentioned above.

There remain a few other morphemes with special phonemic forms. One is the reduplication suffix which alternates with the repetitive and which may be said to have the phonemic form of repeating the phonemes of the morpheme preceding it: it may be written as $C^1V^1C^2V^2$, where C^1 means the first consonant of the preceding mor-

pheme, and so on. Another is a discontinuous dubitative morpheme na'aṣ . . . al. The facts in the case are that the particle na'aṣ always occurs before an initial morpheme which has the dubitative suffix al after it, and wherever al occurs after an initial morpheme, na'aṣ occurs before that initial morpheme. We may therefore consider the two elements as constituting a single morpheme, and thus avoid the necessity of making statements about the mutual limitations of their occurrence. There remain also a few special cases of initial morphemes such as the analogical bases (§12:19).

7. The structure of Yokuts and of Semitic. It is a remarkable feature of Yokuts structure that very many of its features are similar to features of Semitic structure. The case is sufficiently unusual to merit some indication of the similarities.

There are some similarities in the phonemic stock. Yokuts has three stops in each position: intermediate, aspirated, glottalized. Semitic apparently also had three stops in each position: voiced, voiceless and emphatic (with no labial emphatic). There is some slight evidence that the Semitic emphatic may have originally been doubly articulated sounds. Among the phonemic differences may be mentioned the absence of laryngals in Yokuts and the fact that Semitic had only three vowels.

The sequence of phonemic classes which make up an utterance is in general almost identical in the two structures. The formula given above for the Yokuts utterance can be used almost unchanged for Semitic.

There are also a number of similarities in the types of morpheme variation. Both structures very rarely have assimilation or metathesis of consonants. Both have a fair amount of vowel assimilation, although Semitic does not have the particular feature of vowel harmony. Semitic also has no truncation of consonants in suffixes, as Yokuts has. Both have some vowel assimilation across glottal stop.

Many similarities may also be seen in the phonemic structure of morphemes. Semitic has roots consisting (like Yokuts bases) for the most part of 2 or 3 consonants (and in some cases, vowels); there is some evidence that at an early period certain roots contained vowels which may have been independent morphemes rather than parts of the root. Semitic also had reduplication which, as in Yokuts, yields new roots to which suffixes are then added. Whereas Yokuts has only a few morphemes composed entirely of vowel change in the preceding morpheme, Semitic has many of these; on the other hand vowel changes in Semitic are only rarely parts of suffixes. Both structures, however, copiously use vowel change as morphemes or parts of morphemes. Semitic differs from Yokuts in two types of morphemes: doublings of root consonants, and prefixes.

One of the chief similarities between the two structures is in the status of the verb system as a formal nucleus of the morphology. In both, verbalizing and nominalizing suffixes are added to roots which are in themselves neither verbal nor nominal. In both, each verbal affix is added to all roots while each nominalizing affix is added only to particular roots. In both, there has been practically no borrowing of verb forms, while nouns are borrowed; and both have greater dialectal variation in the noun system. In Semitic there are more petrified noun stems than in Yokuts, and also a fair number of original noun roots. In both, nominalizing affixes and case endings always occur together, and in both there are a few new roots analogically formed within the language. The semantic function of some Yokuts noun suffixes are very like Semitic ones (§20:31). Yokuts has, however, many more suffixes, especially of verb aspects and the like, than does Semitic.

A number of syntactic similarities also

appear. The syntactic position of the verbal noun (§20:3, 11) is very similar to that in Semitic.

It is impossible at present, of course, to say how many of these similarities are unusual among languages, how many of them are all the result of merely a few basic structural similarities (e.g. the greater borrowing of nouns is related to their unproductivity), and how important these features are relative to the rest of the two structures.

REVIEWS

THE CROW LANGUAGE: GRAMMATICAL SKETCH AND ANALYZED TEXT. By Robert H. Lowie. University of California Publications in American Archaeology and Ethnology, Vol. 39, No. 1, pp. 1–142, Berkeley and Los Angeles, University of California Press, 1941.

The Crow language is still spoken by about 1,700 speakers who live upon the Crow Indian Reservation in south central Montana.

The present work is a most welcome addition to our knowledge of the Siouan languages in which there has been a growing interest during the past few years. It does not purport to be a complete grammar of Crow, but is rather, to use Lowie's own words, "a preliminary sketch" of the language. Despite this modest statement of intention, the book gives reasonably elaborate accounts of the syntax and morphology of Crow. It is a matter of regret, however, that the phonology of the language is almost completely ignored. One lengthy text is given, accompanied by a literal English translation and replete grammatical notes and word analyses. The translation is a word for word affair and is often, therefore, quite clumsy from the point of view of acceptable English, but serves the useful purpose of enabling one to follow the Crow text.

In spite of their relative paradigmatic poverty, an adequate description of the syntax and morphology of the Siouan languages is no easy task, because of their characteristic linear and somewhat agglutinative structure and tendency towards grammatical freedom and indeterminate flexibility. The formal methods employed to express various grammatical concepts seem to have a broader latitude of application than one might expect. When the contemporary and historical traits of Siouan are compared to the rather rigid conservatism of some other languages, one is impressed by the fluidity of Siouan. For example, all Siouan languages have no formal method of distinguishing the singular and plural of nouns. Crow is in agreement with this, but has developed a rather radical innovation by providing the speaker with an optional method for the grammatical expression of the plural of substantives. Thus, plurality may be indicated by the suppletive suffix -o (p. 31). Hidatsa has a slightly modified form of the same suffix, but apparently no other Siouan language possesses this feature.

The chief morphological processes of Crow are juxtaposition, composition, reduplication, prefixation and suffixation. Rather free use is made of compounding elements, and prefixation is more common than suffixation. Prefixes are employed to express agency, accompaniment, instrumentality, possession, adverbial notions of place and time, and reciprocal relationship. Suffixes convey many vocative, emphatic, diminutive, causative, adverbial, aspectival, and modal notions; indicate the plurality of nouns; and exist as noun classifiers of rather vague semantic significance. Vocalic change or ablaut of final vowels is used grammatically in a few instances, but is often purely phonetic.

Lowie gives some Siouan comparative data and shows some of the main sound shifts that have occurred in Crow. Voegelin[1] has investigated the subject in somewhat more detail. Some further examples are given here. Crow š and s correspond to t of most Siouan languages (Crow še, *dead*, Dakota t'a, Hidatsa, Biloxi and Tutelo te, Osage xéga, Ofo txe, the; Crow bišé, *bison*, Osage tse, Iowa če, Omaha

[1] C. F. Voegelin, Historical Results of Crow-Hidatsa Comparisons, According to Three Methods, Proceedings of the Indiana Academy of Science, 50, 39–42, 1941.

te, Dakota pté, Hidatsa wité·, Catawba widé·). Both Crow and Hidatsa agree with Ohio Valley Siouan, although with a different result, in simplifying the Proto-Siouan consonant cluster mn (Crow na·wi, *three*, Hidatsa rá·wi, Ofo táni, Biloxi dáni, Tutelo ná·ni, Iowa tanyi, Dakota yámni, Catawba ná·mna?). On the other hand, Crow apparently preserves some original clusters, such as št (Crow ište, *eye*; Omaha, Osage, Dakota, and Hidatsa ištá).

Although there are some divergencies, Crow is more closely related to Hidatsa than to any other language on both lexical and phonological grounds. A few cognates are: Crow apé, *nose*, Hidatsa apá, Dakota pasú, Osage and Mandan paxu, Biloxi puču, Ofo apínču, Catawba pįsu·?; Crow ba·pé, *day*, Hidatsa wá·pi, Dakota ąpé, Biloxi napi, Catawba ya·p; and Crow í·re, *blood*, Hidatsa í·ri, Catawba i·t.

Lowie's work is a creditable and important contribution to Siouan linguistics. No strictures are demanded, but the author would have done better had he omitted such inappropriate references to Indo-European grammar as genitive (p. 7), ethical dative, and others. There is no formal expression of case in Crow, as Lowie himself states. The morphology of any language is best described from the point of view of the structure of that language alone, not from the standpoint of semantic function. Except for a few lapses, Lowie has done this.

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LINGUISTIC BULLETIN Number Two of the Technical Manuscripts Committee of the Summer Institute of Linguistics, Mexican Branch. Edited by Kenneth L. Pike. Pp. 23, May 1944.

CLASSIFICATION OF THE YUMAN LANGUAGES. By A. L. Kroeber. University of California Publications in Linguistics, Volume 1, No. 3, pp. 21–40. University of California Press, 1943.

THE NEZ PERCE VERB. By H. V. Velten. The Pacific Northwest Quarterly, Vol. 34, No. 3, July 1943. Pp. 271–92.

The Bulletin is a collection of five critically edited articles dealing with various aspects of Zapoteco, Chontal (2), Mazahua, and Aztec, plus a burlesque on Fascinating Mixteco. The purpose of this mimeographed publication seems to be rather the training of young linguists than the presentation of finished reports. Thus, while Neil Nellis' The Seven Particles of Possession of the Zapoteco de la Sierra Juarez occupies about three pages, a critique of the same by Donald S. Stark, with rewrite, takes up about double that space. In a rapidly expanding field as descriptive linguistics an outlet for beginners such as this must be welcomed; more of the kind, for the languages north and south of Mexico for example, would be highly desirable.

The Yuman languages are classified by Kroeber into four groups, namely, Delta, River, Arizona, and California. The reconstruction appears tentative as a whole in view of the scanty material on which it is based (in the main, relatively uniform vocabularies gathered by Gifford and the author at various times). The number of vowels in Yuma may be five or seven; "labial and nonlabial k interchange occasionally, without apparent rule"; no correspondences are available for w in the River languages; and there are other missing links as well. Clearly, there is crying need for thorough descriptive work in many of the languages involved before drawing up a definitive classification, though the latter will surely follow the outline here suggested.

In addition to being an absolutely first rate statement of the Nez Perce verb complex, the Velten article is a valuable contribution to general linguistics. It combines the best features of the Boas tradition with the not altogether unlike tenets of the Prague school. Comparison of certain distinctive features of Nez Perce with those of Indo-European throws light on the nature

of certain grammatical functions and shows how these can be expressed in various languages by entirely different formal arrangements. The paper has also historic depth. Nez Perce and North Sahaptin are firmly lodged in a family called Sahaptin, and a further relation to Klamath and Molale is suggested; the author uses the term 'linguistic area' to describe the similarities in structure between the Sahaptin group and the genetically unrelated Salish languages. This important principle of identical development as opposed to initial identity, a convergence due to diffusion, is already in use as a historical technique equal in importance to the comparative method.

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